Compilation of laws, regulations and articles on deregulation trends in oil and gas sector.

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The Regulation of the Petroleum Industry in Brazil – English Translation of the text of Law No. 2142 of 1996.

THE REGULATION OF THE PETROLEUM INDUSTRY IN BRAZIL

ENGLISH TRANSLATION OF THE TEXT OF LAW No. 2142 OF 1996, AS APPROVED BY THE HOUSE OF REPRESENTATIVES ON MARCH 19, 1997, THE SENATE ON JULY 16,1997, AND RATIFIED BY THE PRESIDENT OF BRAZIL ON AUGUST 6, 1997

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THE REGULATION OF THE PETROLEUM INDUSTRY IN BRAZIL

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Disposes on the national energy policy, on the activities related to the petroleum monopoly, creates the National Council of Energy Policy and the National Petroleum Agency, and gives other provisions.

The NATIONAL CONGRESS decrees:

Chapter I

ON THE PRINCIPLES AND OBJECTIVES OF THE NATIONAL ENERGY POLICY

Art. 1 - The national policies for the rational utilization of the energy sources will aim at the following objectives:

I - preserving the national interests;

II - promoting development, the growth of the labor market, and the valuation of the energy resources;

III - protecting the consumer interest, including in respect to price, quality and availability of products;

IV - protecting the environment and promoting the conservation of energy;

V - guaranteeing the supply of oil products throughout the national territory, pursuant the paragraph 2 of article 177 of the Constitution.

VI - promoting the increase of natural gas use on an economic base;

VII - identifying the most adequate solutions for the supply of electric energy in the various regions of the country;

VIII - utilizing alternative energy sources through the economic use of available inputs, and applicable technologies;

IX - promoting free competition;

X - attracting investments in energy production;

XI - promoting the growth of the country's competitiveness in the international market.

Chapter II

ON THE NATIONAL COUNCIL OF ENERGY POLICY

Art. 2 - The National Council of Energy Policy, created herewith, linked to the Presidency of the Republic, presided over by the Minister of Mines and Energy, has the attribution of proposing to the President of the Republic national policies and specific measures destined to:

I - promote the rational utilization of the country's energy resources, in accordance with the principles specified in the preceding Chapter and the dispositions of the applicable legislation;

II - guarantee, in terms of regional characteristics, the supply of energy inputs to the country's most remote areas or those of difficult access, submitting the specific measures to the National Congress, whenever they imply the creation of subsidies;

III - periodically review the primary energy supply applied to the various regions of the country, considering the conventional and the alternative sources, and the available technologies;

IV - establish directives for specific programs, as those for the use of natural gas, alcohol, coal, and thermonuclear energy;

V - guarantee the adequate functioning of the National System of Fuel Stocks, and compliance with the Annual Plan of Strategic Fuel Stocks, pursuant Art. 4 of Law no. 8176 of February 8, 1991.

Par. 1 - For the performance of its duties, the National Council of Energy Policy shall be supported by the technical assistance from the entities regulating the energy sector.

Par. 2 - The National Council of Energy Policy shall be regulated by Presidential Decree, which shall determine its composition, and form of functioning.

Chapter III

ON THE ENTITLEMENT AND THE MONOPOLY OF OIL AND NATURAL GAS

Section I

On the Execution of the Monopoly

Art. 3 - The Federal Government owns the oil, natural gas and other fluid hydrocarbon reservoirs existing in the national territory, therein included the onshore, the territorial waters, the continental shelf, and the exclusive economic zone.

Art. 4 - The following activities, referred to in Article 177 of the Constitution, are a monopoly of the Federal Government:

I) the exploration for- and exploitation of oil and natural gas and other fluid hydrocarbon reservoirs;

II) the refining of oil of domestic and foreign origin;

III) the import and export of basic products and oil products, deriving from the activities foreseen on the previous items; and

IV) the maritime transportation of crude oil of domestic origin or of basic products produced in Brazil, as well as the

transportation through pipelines, of crude oil, its products and natural gas.

Art. 5 - The economic activities referred to in the previous article shall be regulated and inspected by the Federal Government and may be carried out, through concession or authorization, by enterprises established under the Brazilian laws, having their headquarters and its administration in Brazil.

Section II

On the Technical Definitions

Art. 6 - For the purpose of this Law and its regulation, the following definitions shall apply:

I - Oil: all and any fluid hydrocarbon in natural state, such as crude oil and condensate;

II - Natural gas or gas: any hydrocarbon which remains in gaseous state under normal atmospheric conditions, produced directly from oil or gas reservoirs, including wet, dry and residual gas and rare gases;

III - Oil Products: products derived from the transformation of oil.

IV - Basic Oil Products: main liquid or gaseous products referred to in article 177 of the Constitution, to be defined by the ANP ;

V - Refining: set of processes aiming at transforming oil intc liquid or gaseous products;

VI - Treatment or Processing of Natural Gas: set of operations aiming at its transportation, distribution and utilization;

VII - Transportation: moving of oil and its products, or natural gas, by means of, or over, a route considered as being of general interest;

VIII - Transfer: moving of oil, its products, or natural gas, by means of, or over, a route considered as being of the specific

and exclusive interest of the owner or the operator of the facility;

IX - Sedimentary basin: a depression in the Earth crust, where sedimentary rocks, which can bear oil or natural gas, associated or not, are accumulated;

X - Reservoir: geological feature with specific properties, bearing oil or gas, associated or not;

XI - Pool: Reservoir, already identified, which can possibly be put into operation;

XII - Prospect: geological feature, mapped as a result of geophysical studies and geological interpretation, where the degree of knowledge can justify exploratory drilling, aiming at finding oil or natural gas;

XIII - Block: part of a sedimentary basin, formed by a vertical prism of indeterminate depth, with a polygonal surface defined by the geographical coordinates of their vertexes, where exploration for- and production activities of, oil and natural gas are carried out;

XIV - Oil or Natural Gas Field: area that can produce oil or natural gas, starting from a continuous reservoir or from more than one reservoir, at variable depths, including existing production installations and equipment;

XV - Exploration: set of operations or activities carried out to evaluate areas, aiming at the discovery and identification of oil and natural gas pools;

XVI - Production: coordinated operations, required for the production of oil or natural gas from a pool and the preparation for moving it;

XVII- Development: set of operations and investments required to make viable the exploitation of an oil or gas field;

XVIII - Commercial Discovery: discovery of oil or natural gas under conditions which, at market prices, make the return of investments in the development and in the production, possible;

XIX - Petroleum Industry: the whole economic activities related to exploration, development, production, refining, processing, transportation, import and export of oil, natural gas and other fluid hydrocarbons and its products;

XX - Distribution: wholesale activities to the resale chain or to majors consumers of fuel, lubricants and bottled liquefied gas made by specialized enterprises, under the terms of the applicable laws and regulations;

XXI - Resale: retail sale activities of fuel, lubricants and bottled liquefied gas, made by service stations or dealers, under the terms of the applicable laws and regulations;

XXII - Distribution of Pipelined Gas: local commercialization services of pipelined gas to the end users, to be done exclusively by the States, directly, or through concessions, under the terms of paragraph 2, article 25 of the Constitution.

XXIII - Natural Gas Storage - storage of natural gas in suitable reservoirs, natural or man-made features.

Chapter IV

ON THE NATIONAL PETROLEUM AGENCY

Section I

On the Institution and its Role

Art. 7 - The Agência Nacional do Petróleo - ANP, is hereon created as an institution integrating the indirect Federal Administration, under the special autarchic regime, as an entity regulating the petroleum industry, linked to the Ministry of Mines and Energy.

Single Paragraph - The ANP shall have its headquarters and forum in the Federal District and main offices in the city of Rio de Janeiro, and may install regional administration offices.

Art. 8 - The ANP aims at promoting the regulation, contracting, and inspection of the economic activities related to the petroleum industry, and shall:

I - within the range of its attributions, implement the national oil and natural gas policy, as a part of the national energy policy, within the terms of Chapter I of this Law, with emphasis on the guarantee of the supply of products throughout the country and on the consumers' interest regarding to price, quality and availability of products;

II - promote studies aiming at the delimitation of blocks, for the purpose of concession of the activities of exploration, development and production;

III - regulate the execution of geological and geophysical surveys, applied to oil exploration, and aiming at the collection of technical data for the commercialization, under a non-exclusive basis;

IV - elaborate the bidding announcements and promote the bidding for the concession of exploration, development and production activities, signing the relevant contracts and inspecting its execution;

V - authorize the refining, processing, transportation, import and export activities, under the norms established by this Law and its regulation;

VI - establish criteria for the calculation of the fees for the transportation via pipelines and define their values, in the cases and the form established by this Law;

VII - inspect, either directly or through agreements with entities of the States and the Federal District, the activities of the petroleum industry , as well as applying administrative and monetary penalties foreseen by law, regulation or contract;

VIII - prepare the processes with declarations of public usage, aiming at the expropriation and the institution of administrative easement of areas essential to oil exploration, development, and oil and natural gas production, construction of refineries, pipelines and terminals;

IX - enforce the good practices for conservation and rational use of oil, its products, of natural gas, and the environment preservation;

X - stimulate the research and the development of new technologies for exploration, production, refining and processing;

XI - organize and upkeep the information and technical data bank related to petroleum industry activities;

XII - consolidate annually the data on national oil and natural gas reserves provided by the companies, and be responsible for their disclosure;

XIII - inspect the appropriate functioning of the Nationa System of Fuel Stocks and the fulfillment of the Annual Plan o Strategic Fuel Stocks, as per article 4 of Law no. 8176 of Februar 8, 1991;

XIV - cooperate with other entities of the energy sector i relation to matters of common interest, including technica assistance to the National Council of Energy Policy (CNPE);

XV - regulate and authorize the activities related to th domestic supply of fuels, inspecting them directly or throug agreements with the Federal Government, States, Federal District o Municipalities.

Art. 9. Besides the assignments established in the previou article, the ANP shall take over, as soon as it is implemented the attributions of the National Department of Fuels - DNC, relate to the activities of distribution and resale, of oil products an alcohol, under the terms of article 77.

Art. 10 - If learning, during the carrying out of its attributions about any fact which represents or may represent an infringemen of the economic order, the ANP shall communicate it to th Administrative Council of Economic Defense - CADE, so that th latter may take adequate measures, in accordance with the relevan legislation.

Section II

On the Organizational Structure of the Autarchy

Art. 11. The ANP shall be directed by a collegiate board compose of one General Director and four Directors;

Par. 1 - One General-Solicitor shall complete th organizational structure of the ANP.

Par. 2 - The members of the board shall be appointed by th President of the Republic, after having their names approved b the Federal Senate, as per item f, III, article 52 of th Constitution.

Par. 3 - The members of the board shall serve a mandate of fou years, not coincidental, renewal of the appointment bein permitted under the terms of article 74 of this Law.

Art. 12. VETOED - (The members of the board of the ANP shall not be discharged, except in case of:

I - a sentence for a crime implying the prohibition to perform a public office or duty;

II - dishonesty, confirmed through an administrative proceeding;

III - serious administrative violation or open non-compliance with office duties, recognized by a well-founded decision by the Federal Senate, on request of the President of the Republic;

Single Paragraph - In the cases foreseen in this article, the President of the Republic may temporarily remove from office the director under investigation, until a final decision is taken by the Federal Senate.) (END OF VETO)

Art. 13 - A person, who holds or held in the last twelve months previous to the beginning of the mandate one of the following links with an enterprise operating any activity comprising the petroleum industry or its distribution, is barred from serving as a director of the ANP:

I - shareholder or partner with a direct individual participation of more than 5% (five percent) of the total social capital or 2% (two percent) of the voting stock of the company or 1% (one percent) of the total capital of the holding company;

II - administrator, managing-partner or member of the supervisory board;

III - employee, even if his contract is temporarily suspended, including of the holding company or a complementary social welfare institution defrayed by the employer;

Single paragraph - Also impeded to serve as a director of ANP is a person, who holds or held in the twelve months previous to the begin of the mandate, an office of director of a labor union or a class association of national or regional extent, representing the interests of enterprises whose activities integrate the petroleum industry or of distribution;

Art. 14 - After the end of his term, a former director of the ANP shall be impeded for a period of twelve months as from the date of his dismissal, to render any type of service, either direct or indirect, to an enterprise with activity in the petroleum industry or of distribution.

Paragraph 1 - During the impediment, the ex-director that has not been dismissed under the terms of art. 12 shall be entitled to continue rendering services to the ANP or to any entity of the Direct Administration of the Federal Government, with remuneration equivalent to the position of management he held previously.

Paragraph 2 - The ex-director who violates the impediment foreseen in this article, shall be guilty of influence peddling and subject to legal penalties.

Section III

On the Income and the Assets of the Autarchy.

Art. 15 - The income of the ANP shall be derived from:

I. the amounts allocated in the General Budget of the Federal Government, special credits, transference and agreed repasses thereto assigned;

II. the government participation referred to in items I and III of article 45 of this Law, pursuant to the operational necessities of the ANP, as listed in the Budget approved.

III. the revenues derived from agreements or contracts signed with entities, organs or enterprises , excepted those mentioned in the previous item;

IV. the donations, legacies, subsidies, and other resources possibly thereto assigned;

V. the product from the emoluments, taxes and fines foreseen in the relevant legislation, the amount settled on the sales and rentals of movable assets or real estate, as well as those deriving from the selling of data and technical information, including for bidding purposes, except those referred to on par. 2 of art. 21 of this Law.

Art. 16. The resources derived from the government participation foreseen in item IV of art. 45, under the terms of art. 15, shall be destined to the support of the expenses of the ANP, for the execution of the activities foreseen in this Law.

Section IV

On the Deciding Process

Art. 17. The deciding process of the ANP shall obey principles of legality, impersonality, morality, and publicity.

Art. 18. The deliberative sessions of the board of directors of the ANP, aiming at resolving disputes between economic agents, and between them and consumers and users of goods and services of the petroleum industry, shall be public, their electronic recording being permitted, and the acquisition of copies by the interested parties being guaranteed.

Art. 19. The initiative of law projects or the alteration of administrative norms implying in a change of the rights of economic agents, consumers or users of goods and services of the petroleum industry, shall be preceded by a public audience, convoked and directed by the ANP.

Art. 20. The by-laws of the ANP will establish the procedures to be adopted for the solution of conflicts among economic agents and among economic agents and consumers, emphasizing conciliation and arbitrage.

Chapter V

ON THE EXPLORATION AND PRODUCTION

Section I

On the General Norms

Art. 21. All rights to oil and natural gas exploration and production on the national territory, therein included the onshore part, the territorial sea, the continental shelf, and the exclusive economic zone, are federal property, and shall be administered by the ANP.

Art. 22. The technical assets, formed by data and information on the Brazilian sedimentary basins are also considered an integral part of the national petroleum resources, to be collected, maintained, and administered by the ANP.

Par. 1. Petróleo Brasileiro S.A. PETROBRAS shall transfer to the ANP information and data on Brazilian sedimentary basins, as well as those on oil or natural gas exploration and production activities, developed due to the exclusivity of the monopoly carried out until de publication of this Law.

Par. 2. The ANP shall establish criteria for remuneration of PETROBRAS for the data and information mentioned in the previous paragraph, whenever they are utilized by the interested parties, subject to the provisions of art.17 of Law no.6404 of 1976.

Art. 23. The oil and natural gas exploration, development and production activities shall be carried out through concession contracts, preceded by tender, as established by this Law.

Single paragraph. The ANP shall define the blocks to be an object of concession contracts.

Art. 24. The concession contracts shall foresee two stages: exploration and production.

Par. 1. Included in the exploration phase are the evaluation activities of eventual discoveries of oil or natural gas, for the determination of its commerciality.

Par. 2. The production phase shall also include the development activities.

Art. 25. Only enterprises complying with the technical, economic and legal requirements established by the ANP may obtain a concession to explore for- and produce, oil and natural gas.

Art. 26. The concession implies, as for the concessionaire, its obligation to explore, for its own expense and risk, and in case of success, produce oil or natural gas in a given block, entitling it to the property of the goods once produced, subject to the relevant charges and relevant legal or contractual participation.

Par 1. In the case of successful exploration, the concessionaire shall submit its plans and projects of development and production to the approval of the ANP.

Par 2. The ANP shall issue its decision on the plans and projects submitted within the maximum term of 180 (hundred and eighty days).

Par 3. If the term established in the previous paragraph is expired without decision of the ANP, the relevant plans and projects shall be considered as approved.

Art. 27. In case of fields extending over adjoining blocks, operated by other concessionaires, the parties involved shall agree on the splitting of the production.

Single paragraph. In case of non-agreement within the maximum period fixed by the ANP, the latter shall, based on an arbiter's award, determinate how the rights to the blocks and the obligations shall be equitably appropriated, based on applicable general legal principles.

Art. 28. The concession shall be extinguished:

I - by the contractual expiration term;

II - by agreement between the parties;

III - by reasons for rescission foreseen in the contract;

IV - at the end of the exploration phase, if no commercial discovery has been made, as defined in the contract;

V - during the exploration phase, if the concessionaire opts to desist and revert the areas, where, according to his judgment, investments in development are not justified.

Par. 1. The reversion of areas, as well as the reversion facilities, shall not imply any expenses whatsoever for the Federal Government or for the ANP, nor do they entitle the concessionaire to any indemnity for services, wells, buildings and returned goods, which shall become a property of the Federal Government, and shall be administered by the ANP, as per item VI of article 43.

Par. 2. In any case of extinction of the concession, the concessionaire shall, on his own account, remove the equipment and goods, which are not an object of reversion, repair of indemnity possible damages arising out of his activities, and carry out any environment recovery ordered by the pertinent entities.

Art. 29. The transfer of the concession contract is permitted, as long as the object and the contractual conditions be preserved and the new concessionaire conforms to the technical, economical and legal requirements established by the ANP, pursuant to art. 25.

Single paragraph. The transfer shall be subject to the previous and explicit authorization given by the ANP.

Art. 30. The contracts for exploration, development and production of oil or natural gas are not applicable to any other natural resource. The concessionaire is obliged to inform the ANP, promptly and exclusively, about any such discovery.

Section II

On the Specific Norms for the Current Activities

Art. 31. PETROBRAS shall submit to the ANP, within 3 (three) months from the publication of this Law, its program of exploration, development, and production, containing information and data providing:

I - knowledge of the production activities in each field, whose demarcation may include an area of technical safety;

II - knowledge of the exploration and development activities, informing, in this case, the costs incurred, the investments made, and the schedule of future investments in each block where prospects are defined.

Art. 32. PETROBRAS shall have confirmed its rights on each one of the fields actually in production on the effective date of this Law.

Art. 33. On the blocks in which, on the effective date of this Law, PETROBRAS has made commercial discoveries or made investments in exploration, it may, considered its capacity to invest, including through financing, continue the exploration and development activity, for a period of 3 (three) years, and in case of success, continue the production activities.

Single paragraph. The ANP, after evaluating the financial capacity of PETROBRAS, the data and the information pursuant to art. 31, shall approve the blocks where the activities referred to in this article, may continue.

Art. 34. After fulfillment of the provisions of Art.31, and within one year from the effective date of this Law, the ANP shall sign with PETROBRAS, dispensing with the tender foreseen in art. 23, concession contracts of the blocks which meet the conditions established in art. 32 and 33. The Agency shall then define, in each one of the contracts, the relevant participations, under the terms established in Section VI.

Single paragraph. The concession contracts referred to in this article shall comply, where pertinent, with the general norms established in the previous Section, and obey the provisions of Section V of this Chapter.

Art. 35. The blocks not covered by a concession contract made in accordance with the previous article, and those where exploration proved to have been unsuccessful, or those not contracted with the ANP in due time, shall be the object of a tender by the ANP, aiming at new concession contracts, under the general norms established in the previous Section.

Section III

On the Bidding Announcement

Art. 36. The bidding for the grant of concession contracts, referred to in art. 23, shall be subject to the provisions of this Law, to the regulations to be issued by the ANP, and to the relevant bid announcement.

Art. 37. The announcement will be accompanied by the basic draft of the pertinent contract, and shall obligatorily indicate:

I - the block, object of the concession, the duration estimated for the exploration phase, the investments, and minimum exploratory programs;

II - the requirements to be satisfied by the bidders, as per art.26, and the criteria for pre-qualification, whenever this procedure is adopted.

III - the minimum governmental participations, as per art. 45;

IV - the list of documents required and the criteria to be followed for the evaluation of the technical capacity, the financial capacity, and the legal regularity of the parties, as well as for the technical and economical-financial evaluation of the proposal;

V - the explicit indication that the concessionaire shall be responsible for the indemnities due to expropriations or easements necessary for the carrying out of the contract;

VI - the place, date and time, in which the data, studies, and remaining elements and information required for the preparation of the proposal, as well as its acquisition cost, shall be furnished to the interested parties;

Single paragraph. The duration of the exploration phase, referred to in item I of this article, shall be estimated by the ANP, in terms of the level of available information, of the characteristics, and location of each block.

Art.38. When the participation of companies in consortium is allowed, the bid announcement shall contain the following requirements:

I - evidence of commitment, public or private, of formation of the consortium, signed by the consortium companies;

II - appointment of the leader company responsible for the consortium and for conducing the operations, without excluding the responsibility of each one of the other participants in the consortium.

III - presentation, by each one of the participants in the consortium, of the documents requested for evaluation of the technical capacity, and financial good standing qualification of the consortium;

IV. no permission for a particular participant to participate in another consortium, nor individually, in the bidding for the same block.

V - the concession grant to a consortium winning a bid shall be subject to the registration of the consortium's constitutive document, according to the provisions of art.279, single paragraph, of Law no.6404, of December 15, 1976.

Art. 39 - The announcement shall contain the requirement that the foreign company bidding individually or through a consortium, shall submit together with the proposal, and in a separate envelope:

I. evidence of technical capacity, financial good standing and judicial and fiscal regularity, under the terms of the regulation to be issued by the ANP;

II. complete documentation of its constitutive acts, and evidence of being organized and functioning regularly under the laws of its home country;

III. appointment of a legal representative before the ANP, duly empowered to carry out acts and assume responsibilities related to the competitive bidding and the proposal presented; and

IV. commitment, if successful, to form an enterprise, according to the Brazilian Laws, with headquarters and administration in Brazil.

Single paragraph. The signature of the concession contract shall be subject to the effective fulfillment of the commitment undertaking according to item IV of this article.

Section IV

On the Judgment of the Bidding

Art. 40. The judgment of the bidding shall identify the most advantageous proposal, according to objective criteria established in the bid announcement, and shall obey principles of legality, impersonality, morality, publicity, and equality between the bidders.

Art. 41. Besides other criteria explicitly established in the announcement, the following shall be considered:

I. the general work program, the proposed exploration activities, duration, minimum investment volumes, physical-financial schedule;

II - the government participation as per art. 45;

Art. 42. In case of a tie, the bid shall be decided in favor of PETROBRAS, provided it is not bidding in consortium with other enterprises.

Section V

On the Concession Contract

Art. 43. The concession contract shall duly reflect the conditions of the announcement and the winner proposal shall have the following essential clauses:

I - the definition of the block object of the concession;

II - the duration of the exploration phase and the conditions for its extension;

III - the work program and the volume of investment foreseen;

IV - the obligations of the concessionaire regarding participations, as per Section VI;

V - the indication, as the case may be, of the guarantee to be provided by the concessionaire on the compliance of the contract, including regarding the investments committed to each phase;

VI - the rules on handing back and relinquishment of areas, including the removal of equipment and installations, and the reversion of goods;

VII - the procedures for follow up and inspection of the operations of exploration, development and production and auditing of the contract;

VIII - the obligation of the concessionaire to present to the ANP reports, data and information regarding the activities developed;

IX - the procedures related to the transfer of the contract, pursuant to art. 29;

X - the rules for the solution of controversies relating the contract and its execution, including by conciliation and international arbitration;

XI - the cases of cancellation and extinction of the contract;

XII - the penalties applicable in case of non fulfillment of the contractual commitments by the concessionaire;

Single paragraph - The contractual conditions for an extension of the duration of exploration, as per item II of this article, will be established as to guarantee the restitution of a percentage of the block, at discretion of the ANP , and the increase of payment due for the occupation of the area, pursuant the single paragraph of article 51.

Art. 44. The contract shall establish that the concessionaire is obliged to:

I. adopt in all operations the necessary procedures for conservation of the reservoirs and other natural resources, for the safeguard of people and equipment and for the preservation of the environment;

II. immediately report the discovery of any reservoirs of oil, natural gas, other hydrocarbons or minerals to the ANP;

III. make the evaluation of the discovery, under the terms of the program submitted to the ANP, presenting a report on its commerciality, informing its interest in developing the field;

IV. submit to the ANP, the development plan of any field declared commercial, including the schedule and the investment estimate;

V. be responsible before court for the acts of its agents and indemnify any damage deriving from the exploration and production activities contracted, reimbursing the ANP or the Federal Government, for any expenses they might incur, deriving from possible law suits arising out from acts of the concessionaire's responsibility;

VI. adopt the best practices of the international petroleum industry and obey the applicable norms, technical and scientific procedures, including appropriate recovery techniques, aiming at the production rationalization, and controlling the decline of reserves.

Section VI

On the Participations

Art. 45. The concession contract shall dispose on the following government participations, foreseen in the bidding announcement:

I. signature bonus;

II. royalties;

III. special participation;

IV. fees for the occupation or retention of area.

Par.1 - The government participation foreseen in items II and IV and shall be obligatory.

Par. 2 - The income derived from the government participations as defined in the *caput* of this article, to be allocated to entities of the federal public administration, according to the provisions of this Law, shall be kept in the Federal Government Single Account, while they are not destined to the relevant program.

Par. 3 - The finance surplus balance from the entities of the federal public administration referred to in the previous paragraph, settled in balance sheet of each fiscal year, shall be transferred to the National Treasury.

Art. 46. The minimum value of the signature bonus shall be established in the bidding announcement and shall be equal to the payment offered in the proposal for obtaining the concession and shall be paid on the signature of the contract.

Art. 47. The royalties shall be paid monthly in local currency, as from the date of the start up of the commercial production of each field, in an amount corresponding to 10% (ten percent) of the production of oil or natural gas.

Par. 1 - Considering the geological risks, production expectations, and other relevant factors the ANP may define, on the relevant bidding announcements, the reduction of the royalties established in the *caput* of this article, down to a minimum of 5% (five per cent) of the production.

Par. 2 - The criteria for the computation of the value of the royalties shall be established by Presidential Decree, based on the market prices for oil, natural gas, or condensate, on the specification of the product and on the location of the field.

Par. 3 -The gas flared impairing its commercialization and the loss of product occurred under the responsibility of the concessionaire, shall be included in the total production volume for calculation of the royalties due.

Art. 48 - The portion of the royalty value, foreseen in the concession contract, representing 5% (five percent) of the production and corresponding to the minimum amount referred to in par. 1 of the previous article, shall be distributed according to the criteria established in Law no.7990 of December 28, 1989.

Art. 49. The portion of the royalty value exceeding 5% (five percent) of the production, shall be distributed as follows:

I - when production occurs onshore or in lakes, rivers, lake or river islands:

a) 52.5% (fifty two point five percent) to the States, where the production occurs;
b) 15% (fifteen percent) to the Municipalities, where the production occurs;
c) 7.5% (seven point five percent) to the Municipalities, that are affected by the operations of landing or shipment of oil and natural gas, according to the conditions and criteria to be established by the ANP;
d) 25% (twenty five percent) to the Ministry of Science and Technology, for the financing of programs supporting scientific research and technology development applied to the petroleum industry;

II - when production occurs on the continental shelf:
a) 22.5% (twenty two point five percent) to the States fronting the production area;
b) 22.5% (twenty two point five percent) to the Municipalities fronting the production areas;
c) 15% (fifteen percent) to the Navy Ministry, to meet the requirements of inspection and protection of the production areas;
d) 7.5% (seven point five percent) to the Municipalities that are affected by the operations of landing or shipment of oil and natural gas, according to the conditions established by the ANP.
e) 7.5% (seven point five percent) for the build up of a Special Fund, to be distributed among all States, Territories, and Municipalities;
f) 25% (twenty five percent) to the Ministry of Science and Technology, for the financing of programs supporting scientific research and technology development applied to the petroleum industry.

Par. 1. Of the total resources destined to the Ministry of Science and Technology, a minimum of 40% (forty percent) shall be applied in programs for promoting the qualification and the scientific and technologic development of the Northern and Northeast Regions;

Par. 2 - The Ministry of Science and Technology shall administer the programs supporting scientific research and technology development foreseen in the *caput* of this article, with the technical assistance of ANP , fulfilling the provision of item X of article 8, and through agreements with the Country

universities and research centers, according norms to be defined by Presidential Decree.

Art. 50. The bid announcements and the contracts shall establish that in case of a large production volume, or great profitability, there shall be a special participation, to be regulated by Presidential Decree.

Par. 1. The special participation shall be applied on the gross revenue of production, after the deduction of royalties, exploration investments, operational costs, depreciation, and taxes foreseen in the current legislation.

Par. 2. The resources from the special participation shall be distributed as follows:

I - 40% (forty percent) to the Ministry of Mines and Energy, for payment of geological and geophysical studies and services applied to oil and natural gas exploration, to be promoted by the ANP, under the terms of items II and III of article 8;

II - 10% (ten percent) to the Ministry of Environment, of Hydrous Resources and of the Legal Amazon Region, destined to the development of studies and projects related to the protection of the environment and to the recovery of environment damage caused by the petroleum industry activities;

III - 40% (forty percent) to the State, where the onshore production occurs, or which fronts the continental shelf where production occurs;

IV - 10% (ten percent) to the Municipality where the onshore production occurs, or which fronts the continental shelf where production occurs.

Par. 3 - The studies referred to in the item II of the previous paragraph shall be developed by the Ministry of Environment of Hydrous Resources with technical assistance of the ANP, under the provisions of item IX of art.8.

Art. 51. The bid announcements and the contract shall determine the payment due for the occupation or retention of the area to be made yearly, based on a square kilometer or fraction basis of the block area, under the terms of the regulation through a Presidential Decree.

Single paragraph. The amount of the payment for occupation or retention of the area shall be increased by a percentage to be

established by the ANP, whenever the exploration period is extended.

Art. 52. The concession contract of an onshore block shall also contain a clause determining a payment to the surface owners of the property, a participation equivalent in local currency to a variable participation between 0.5% (zero point five percent) and 1.0% (one per cent) of the value of oil or natural gas production, according to the ANP's criteria.

Single paragraph. The participation referred to in this previous article shall be distributed proportionally to the production taking place on properties regularly demarcated on the surface of the block.

Chapter VI

ON THE REFINING OF OIL AND PROCESSING OF NATURAL GAS

Art. 53. Any enterprise or consortium of enterprises, which meet the requirements of art. 5, may submit to the ANP, a proposal, enclosing the relevant project, to build and operate refineries and processing plants and storage facilities of natural gas, as well as to expand their capacity.

Paragraph 1. The ANP shall establish the technical, economical and legal requirements to be complied with by the proponents, and those regarding environment protection, industrial safety and safety of the people.

Paragraph 2. Once the requirements of the previous paragraph are fulfilled, the ANP shall issue the authorization pursuant to item V of article 8, defining its object and its entitlement.

Art. 54 - The transfer of the entitlement of the authorization shall be permitted, after the previous and explicit approval by the ANP, as long as the new holder of the entitlement complies with the requirements established in par. 1 of the previous article.

Art. 55 - Within 180 (one hundred and eighty) days from the publication of this Law, the ANP shall issue the relevant authorizations for existing refineries and natural gas processing plants, confirming their entitlement and rights.

Single paragraph. The authorizations referred to in this article shall be subject to the provisions of art. 53, concerning transfer of entitlement and expansion of installation capacity.

Chapter VII

ON THE TRANSPORTATION OF OIL, OIL PRODUCTS AND NATURAL GAS

Art. 56. Any enterprise or consortium of enterprises complying with the provisions of art. 5, may receive authorization from the ANP to build installation and to carry out any kind of transportation of oil and oil products, either destined for the internal market, or for import or export.

Single paragraph. The ANP shall issue norms on the eligibility of interested parties, and the conditions for the authorization and transfer of its entitlement, observing the fulfillment of the requirements for environment protection and traffic safety.

Art 57. Within 180 (one hundred and eighty days) from the publication of this Law, PETROBRAS and the other enterprises that own equipment and installation for maritime and pipeline transportation shall receive from the ANP the relevant authorizations, ratifying their entitlement and their rights.

Single paragraph. The authorizations mentioned in this article, shall obey the norms established in the single paragraph of the previous article, as to the transfer of the entitlement and the expansion of capacity of the installation.

Art. 58. Any interested party may use the transportation pipelines and the maritime terminals, existent or to be built, through adequate remuneration to the entitled holder of the installation.

Par. 1 - The ANP shall establish the value and payment form of the adequate remuneration between the parties involved, in case they fail to reach and agreement. The ANP shall also check whether the agreement value is compatible with the market price.

Par. 2. The ANP shall regulate the priority to be attributed to the owner of the installation to handle its own products, aiming at

the optimum utilization of the transport capacity by the available means.

Art. 59 . Transfer pipelines shall be reclassified by the ANP as transport pipelines, under the provisions of this Chapter, in case that there is proven interest by third parties.

Chapter VIII

ON THE IMPORT AND EXPORT OF OIL, OIL PRODUCTS, AND NATURAL GAS

Art. 60. Any enterprise or consortium of enterprises complying with the provisions of art.5 [of this Law] may obtain authorization of the ANP to import and export of oil and its products, of natural gas and condensate.

Single Paragraph. The carrying out of the activities referred to in the *caput* of this article must comply with the directives of the CNPE, particularly the ones related to the Law no. 8176 of February 8, 1991, and shall obey to the other relevant legal norms and regulations.

Chapter IX

ON PETROBRAS

Art. 61. Petroleo Brasileiro S.A. - PETROBRAS, is a corporation with Federal Government and private stockholders, linked to the Ministry of Mines and Energy. Its objective is the exploration, exploitation, refining, processing, commerce and the transportation of oil from wells, oil-shale or other rocks, of its products, of natural gas and other fluid hydrocarbon, as well as any other related or similar activities, as defined by law.

Par.1. The economic activities referred to in this article shall be carried out by PETROBRAS under free competition with other enterprises, within market conditions, observing the transition period foreseen in Chapter X and the other principles and directives of this Law.

Par. 2. PETROBRÁS may carry out, directly or through its subsidiaries, associated or not with third parties, outside the Brazilian territory, any of the activities listed in its bylaws.

Art. 62. The Federal Government shall maintain the share holding control of PETROBRÁS, through the ownership and possession of a minimum of 50% (fifty percent) of the shares plus one, of the voting capital.

Single paragraph. The capital stock of PETROBRÁS is divided into common (voting) stock and preferential (non-voting) stock, both book-entry stock, as per art. 34 of Law no. 6404, of December 15, 1976.

Art. 63. PETROBRAS and its subsidiaries are hereby authorized to form consortia with national or foreign enterprises, either as leader or not, aiming at the expansion of its activities, the gathering of technologies, and the expansion of investments applied to the petroleum industry.

Art. 64. For the strict fulfillment of the activities foreseen in its bylaws, within the petroleum industry, PETROBRAS is hereby authorized to establish subsidiaries, which may associate with other enterprises, either with majority or minority participants.

Art. 65. PETROBRAS must establish a subsidiary with the specific duty of building and operating its pipelines, sea terminals and fleet for the transportation of oil, products, and natural gas. Such subsidiary may make associations with other enterprises, with majority or minority participation.

Art. 66. PETROBRAS may transfer to its assets any securities received by its subsidiaries, arising out from the National Privatization Program, through due reduction on its participation on the share-hold equity of the subsidiary.

Art. 67. The acquisition of goods and the contracting of services by PETROBRÁS shall be preceded by a simplified bidding procedure, to be defined by Presidential Decree.

Art. 68. For the preparation of proposals to participate in bidding preceding the concessions dealt with in this Law, PETROBRÁS may subscribe pre-contracts, by sending out invitation letters, in order to secure prices and commitments of delivery of goods and services.

Single paragraph. The pre-contracts shall contain a rightful resolvent clause, to be exerted, without penalty or indemnity, in case another bidder be declared winner, and shall be submitted, a *posteriori*, to the appreciation of the organs of external control and verification.

Chapter X

ON THE FINAL AND TRANSITORY DISPOSITIONS

Section I

On the Transition Period

Art. 69. During the transition period of a maximum of 36 (thirty six) months, as from the publication of this Law, the price re-adjustments and revisions of the basic oil products and of natural gas, observed by the refineries and processing plants, shall be made obeying specific directives and parameters to be established jointly by the Minister of the Financy and the Minister of Mines and Energy.

Art. 70. During the transition period mentioned in the previous article, the ANP shall establish criteria for the import of oil, of its basic products, and of natural gas, compatible with the criteria of liberation of prices, foreseen in the same provision.

Art. 71. The basic oil and natural gas products that are raw materials for the petrochemical industry, shall have the same treatment foreseen in articles 69 and 70, aiming at the competitiveness of the sector.

Art. 72. During the period of 5 (five) years, as from the publication of this Law, the Federal Government shall guarantee, by means of the ANP, to the private refineries operating in the Country, excluded from the Federal monopoly, under the terms of article 45 of the Transitory Constitutional Dispositions, operational and economic conditions, based on current criteria applicable to the refining activity.

Par. 1. During the period foreseen in this article, the following provisions shall be observed:

I - VETOED (the refineries oblige themselves to maintain the jobs existing on the day of the publication of this Law); (END OF VETO)

II - the refineries oblige themselves to submit to the ANP their plan of investments, aiming at the technological modernization and the expansion of productivity of their refining plants, looking forward for increasing the production and the resulting reduction of the subsidies that are provided to them.

III - The ANP shall evaluate periodically the degree of competitiveness of each one of the private refineries and the carrying out of its plan of investments and resulting reduction of subsidies related to each one of them.

Art. 73. Until the expiration of the transition period established in article 69, the prices of the basic products practiced by PETROBRAS may take into consideration the charges derived from the subsidies applicable on the activities carried out by the company.

Single paragraph. With the exception to the conditions and terms established in the previous article, any subsidy upon the prices of the basic oil products, within the period foreseen in art.69, must be proposed by the CNPE and submitted to the approval of the Congress, under the terms of item II of art.2.

Art. 74. The Secretariat of the National Treasury shall make a complete survey of all reciprocal credits and debts, of the Federal Government and of PETROBRAS, comprising the different accounts of reciprocal obligation, and subsidies, including those deriving from the so-called Oil, Products and Alcohol Account, established by Law no. 4452, of November 5, 1964, and complementary legislation. The National Treasury shall be reimbursed of the minimum legal dividends possibly underpaid as from the effective date of Law no. 6404 of December 15, 1976.

Single Paragraph. Until the end of the transition period, the balance of this account shall be settled by the debtor. The Federal Government, if debtor, may opt to settle the debt by issuing National Treasury bonds.

Section II

On the Final Dispositions

Art. 75. In the composition of the first Board of Directors of the ANP, in order to implement the transition to the system of non-coincident mandates, the General Director and two other Directors shall be appointed by the President of the Republic, through indication made by the Minister of Mines and Energy, respectively with mandates of three, two, and one year, while two Directors shall be appointed according to the provisions in paragraphs 2 and 3 of article 11.

Art. 76. The ANP may contract specialists to carry out specific jobs in the technical, economic, and legal areas, on limited projects and duration, dispensing from bidding requirements in the cases foreseen in the applicable legislation.

Single paragraph. The ANP is hereby authorized to make temporary contracts, not exceeding thirty six months, under the terms of art. 37 of the Constitution, the technical staff indispensable for the implementation of its activities.

Art. 77. The Government shall promote the installation of the CNPE and shall establish the ANP through the approval of its regimental structure, until 120 (one hundred and twenty) days, as from the publication of this Law.

Par. 1. The regimental structure of the ANP shall include commissioned and extra-remunerated offices, existent in the National Fuels Department (DNC).

Par. 2. VETOED (A Specially Commissioned General Director is hereby created in the ANP). (END OF VETO)

Par. 3. As long as the ANP is not implemented, its duties shall be carried out by the Ministry of Mines and Energy.

Art. 78. Once the ANP is implanted, the National Fuels Department (DNC) shall be extinguished.

Single paragraph. The technical assets, the obligations, the rights, and the revenues of DNC shall be transferred to the ANP.

Art. 79. The Government is hereby authorized to re-deploy, transfer or utilize the budget credit balances of the Ministry of Mines and Energy, for the implementation and maintenance of the ANP. It shall use, as well, as resources the budget allotments for its activities, observing the same sub-projects, sub-activities, and expenditure groups foreseen in the Budget Law in force.

Art. 80. The provisions of this Law shall not affect previous rights of third parties, through contracts made with PETROBRÁS, under the laws in force, and shall not invalidate acts carried out by PETROBRAS and its subsidiaries in conformity with their by laws, which shall be adjusted, whereat required, to this Law.

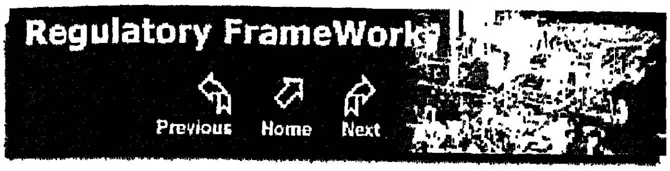
Art. 81. The dispositions of this Law are not applicable to the installation and equipment for the carrying out of local services of pipelined gas distribution, referred to in par. 2 of article 25 of the Constitution.

Art. 82. This Law shall be in force on the date of its publication. The provisions to the contrary, including Law no. 2004, of October 3, 1953, are hereby revoked.

The Floor of the House of Representatives, March 19, 1997.

(Signed) Eliseu Resende
(Relator)

Note: Please note that while every effort was made for accuracy in the translation of technical and legal terms, this is not a notarized legal or official translation of Brazil's Regulatory Law and is only meant to give a good general idea of the Law.





IT'S

Click here to get the full text of Law no. 9478.

(23 kbytes Microsoft Word Document Compressed with PKZIP)

The new Petroleum Law (Law no. 9478 of Agust 6th, 1997) and the actions so far taken by the Government indicate that a flexible and competitive petroleum regime will be ruling the petroleum activities in the country.

The Petroleum Law Highlights

1. A National Council for Energy Policy, attached to the Presidency of the Republic, will be in charge of formulating the national energy policies.
2. A National Council for Energy Policy, attached to the Presidency of the Republic, will be in charge of formulating the national energy policies.
3. The Agency will keep, handle and control all data and information, from now on considered as the country's assets
4. E&P opportunities will be ruled by a flexible concession system
5. E&P rights will be granted by the Agency through competitive bidding rounds.
6. Pursuant to the National Constitution, the Brazilian State is, by virtue of its sovereign rights, the owner of all natural resources, including oil and gas reserves. Ownership of petroleum production is, however, transferred to the holder of a production concession at the moment it reaches the well head.
7. Subject to the Agency's directives and rules, companies will be authorized to import and export petroleum and petroleum products.
8. Petrobras will receive equal treatement as any other petroleum company in Brazil.
9. Petrobras will be free to negotiate partnership agreements in its areas.
10. Petrobras will have its rights confirmed over producing fields and exploratory areas in which it has already made discoveries or significant investments. This confirmation of rights and the issuance of the relevant concession will be based on the ANP's evaluation of Petrobras' investment and working programs, and no bidding process will be held therefor.
11. All the remaining areas will be surrendered to the ANP, and put for bidding applications according to the Government's policies to be implemented by the ANP. Minimum government-takes will be stated at the tender Announcement.
12. In addition to the regular taxation applicable to any Brazilian company, E&P activities will be subject to surface rental and royalties (the latter varying from 5 to 10%) on a mandatory basis; signature bonus will be eventually called, and a special take will be applied in cases of large volumes of production or great profitability.
13. Besides the government-takes offered, a minimum exploratory commitment, by

Besides the government-takes offered, a minimum exploratory commitment, by means of an objective criteria, will identify the most advantageous bidding offer.

The Contractual Model

Without neglecting the country's peculiarities, the Brazilian government has clearly demonstrated the intention to benefit from other countries' experience in dealing with the petroleum industry.

The new Petroleum Law adopted the usual concessional regime following a pattern similar to those of most developed countries.

Taking into account the great variety in prospectiveness of the Brazilian areas, this approach can be considered as the most appropriate, since it gives the government the flexibility to treat different opportunities under different conditions.

Some other usual burdens, such as income tax, will be handled by the proper authorities in a similar manner other business companies are treated.

The government-take will comprise:

i rental fee: to be determined by Presidential Decree as a fixed fee per km2 of retained area.

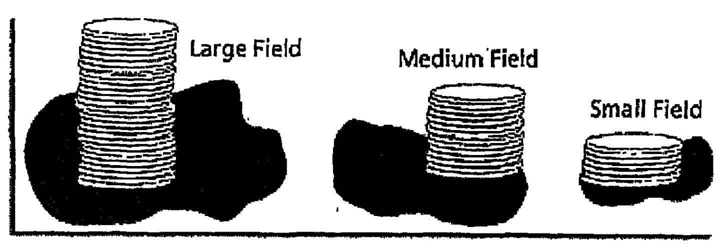
ii royalties: varying from 5% to 10% of gross production.

These two items will always be present in the concessions. Mandatory.

iii signature bonus.

iv special participation: similar to the Special Tax in Norway and the Production Revenue Tax in the UK, an additional take that may be imposed on net revenues in case of great producing volumes or actual economic bonanza.

These two latter items will provide the ANP with necessary economic flexibility.



New Zealand Petroleum Legislation Framework

WHO WE ARE
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SITE ENTRY
WHAT'S NEW

Crown Minerals

Crown Minerals allocates permits to companies to undertake petroleum exploration or development in New Zealand. The types of permits and conditions are outlined.

New Zealand Petroleum Legislation Framework

Introduction

All petroleum existing in its natural condition in New Zealand is the property of the Crown (represented by the Government) and accordingly a company wanting to undertake petroleum exploration or development in New Zealand needs to either obtain a permit or to farm-in to an existing petroleum permit or licence.

Permits are granted pursuant to the Crown Minerals Act 1991 and in accordance with the Minerals Programme for Petroleum and the relevant Petroleum Regulations.

The Minerals Programme for Petroleum outlines the policies, procedures and provisions for the management of the country's petroleum resource, while the Petroleum Regulations include details of how applications are to be made. The following article considers the types of permits and their allocation

Types of Permit

Three types of permit may be obtained, allowing for a varying intensity of activities in the search for and extraction of petroleum.

Petroleum Prospecting Permits

Petroleum Prospecting Permits allow a company to undertake reconnaissance and general investigative studies over large areas. More than one permit may possibly be issued over the same area. Permits are generally granted for a period of one year. No rights to subsequent permits are provided for.

Prospecting permits may be applied for at any time over land which, at the time of application, is available for permitting.

Petroleum Exploration Permits

Petroleum Exploration Permits are the main permit mode for petroleum exploration in New Zealand. They are granted for the purpose of undertaking work to identify petroleum deposits and evaluating the feasibility of mining any discoveries made. Exploration activities include geological, geochemical and geophysical surveying, exploration and appraisal drilling and testing of petroleum discoveries. Exploration permits are typically issued for a 5-year period Explorers have a right of renewal for a further period, at which stage 50 per cent of the original permit area must be relinquished.

Petroleum Exploration Permit holders have exclusive exploration rights and the right to the award of a mining permit if a petroleum discovery is made, subject to there being an approved development work programme.

Petroleum Mining Permits

Petroleum Mining Permits are granted to enable the development of a petroleum field allowing the extraction and production of petroleum.

Petroleum Exploration Permit Allocation

Petroleum Exploration Permits may be allocated as the result of either:

- An Acceptable Frontier Offer

  or

- A Petroleum Exploration Permit Block Offer.

Acceptable Frontier Offer

Virtually all unpermitted areas in New Zealand are available for exploration on the basis of Acceptable Frontier Offers. This mechanism provides the opportunity for explorers to submit non-competitive bids over either onshore or offshore areas of their choice. Such applications may be made at any time, over any part of New Zealand that is currently available for exploration.

The Acceptable Frontier Offer allocation method allows an explorer, who has financial and technical resources, the opportunity to obtain a permit and commence exploration activity within a short time-frame. The emphasis of the evaluation process for these applications is on the statement of proposed work and any supporting information The work programme should detail the minimum work that is proposed to be undertaken and should clearly define the stages proposed to complete the work and any ongoing work commitment options (refer to the discussion below)

Size of Application Area

Acceptable Frontier Offers should be for a "permit-sized" area While there is no fixed size for permits, typically exploration permits onshore and in prospective areas offshore will be in the range of 150 to 5000 square kilometres. Exploration permits in less explored offshore areas will be in the range of 3000 to 25 000 square kilometres. If the proposed permit is for an area greater than 6000 square kilometres, then it will be a condition of the grant of the permit that there will be requirements regarding partial relinquishments of the area of the permit after defined periods.

Form of Application

The form of application for Acceptable Frontier Offers is detailed in the Petroleum Regulations. However, in summary, two copies of any application made shall be supplied, each copy being accompanied by·

- a map or maps of the permit application area, with the boundary of the permit application area fully defined in terms of latitude and longitude and coastline where applicable
- a statement specifying the duration required for the permits
- a statement detailing
  - the exploration work programme proposed to be carried out on the area covered by the permit
  - the reasons why such a programme is proposed
  - the estimated cost of the programme and
  - any options proposed for the surrender of the permit, and when it is proposed that such options may be exercised
- the full legal name and business address of the applicant, and where the applicant is a company, the registered office of the company
- a statement detailing the technical qualifications and financial resources of the applicant to enable an assessment to be made by the Minister of Energy as to the ability of the applicant to carry out the proposed exploration work programme and to comply with the Crown Minerals Act

The applicant may be asked to supply additional information when considering the application. An application fee as specified in the Petroleum Regulations must be forwarded with each application.

Requirements of Applicants

An application can be submitted by a single company, a group of companies, or a joint venture. In all cases, the Minister of Energy must be satisfied the applicant(s) has the financial and technical capability to undertake the proposed

programme of work up to the completion of at least one exploration well without needing to attract farm-in partners to finance the activity. However, there is no restriction on additional or replacement farm-in partners during the course of the permit, either before or subsequent to well drilling, provided that the new joint venture retains the financial and technical capability to undertake the work programme.

Minimum Work Programme Requirements

An Acceptable Frontier Offer application for a petroleum exploration permit must comply with the following work programme requirements:

i. In an area of application where there has been little or no recent geophysical or well drilling activity (which is the case in most unpermitted areas):

   A programme of work, which provides for the completion of such detailed exploration work as is necessary to determine an exploration well drilling location, within 30 months of the commencement date of the proposed permit. At the completion of this work, the programme must provide for either the surrender of the permit or a commitment to the spudding of an exploration well within 36 months of the commencement date of the proposed permit.

ii. In an area where there has been recent geophysical or well drilling activity:

   The same work programme requirements as in (i) above apply, except that a drilling location must be determined within 12 months and either a commitment made to spud an exploration well within the next 12 months or the permit surrendered

The Minister of Energy must be satisfied that the programme of work for the full term of the proposed permit will result in ongoing working of the granted permit in accordance with good exploration and mining practice and that, as a result of exploration operations, there will be increased knowledge of New Zealand's petroleum resources and petroleum potential.

Priority of Application

If an Acceptable Frontier Offer has been received and is being processed when a subsequent application is received, the first application is considered solely on its merits and any subsequent application is not considered until the first has been finally disposed of by being granted, declined or withdrawn.

Blocks Offers

Petroleum Exploration Permit Blocks Offers can be initiated either by the Minister of Energy or by an explorer Such Blocks Offers are advertised and staged work programme bids called for. The applicant proposing the best staged work programme will generally be the successful bidder. Typically a staged work programme for the first three years is required, with a decision on the next two years work made in the third year of the permit. The Minister of Energy must be satisfied that the applicant will comply with the conditions of the permit, and can give proper effect to them. Currently there are no Blocks Offers on offer

How to Initiate Blocks Offers

Blocks Offers can be initiated at any time, either by the Minister of Energy or by a company or consortium. In the latter case the company or consortium would advise New Zealand Crown Minerals in confidence of the area of interest and once that is defined the block would be advertised as available for bids. Unlike an Acceptable Frontier Offer this creates a competitive bidding situation for the proposer but raises the prospect of a less demanding work programme being required of the successful bidder. The initiator of the Blocks Offer normally has a considerable advantage over other potential bidders, because of the comparatively short time span allowed for bids (normally six months), the input the initiator of the Blocks Offer has had in defining the area, and the advanced preliminary evaluation and planning that could be expected to have been done.

Assessments of Applications

Petroleum Exploration Permit applications are assessed on the basis of the minimum programme of work and the timing of the exploration activities proposed to be undertaken by the applicant. In general a permit will be awarded to the applicant proposing the greatest amount of exploration work within the application area.

Permit Holder Rights and Obligations

- A permit holder has the right to any petroleum discovered, subject to the conditions contained within the permit.
- Exploration and mining permits confer exclusive rights to the permit holder.
- The permit holder is obliged to comply with the conditions of the permit (including royalty conditions and undertaking a defined programme of work), and relevant Acts and Regulations. These include forwarding activity reports to the Ministry of Commerce and paying annual fees.
- The granting of a permit does not confer a right of access to any land. Access is negotiated directly with the owner and occupier.

Royalty Provisions

New Zealand has developed new internationally competitive royalty provisions stipulating the payment of either an ad valorem royalty (AVR) or an accounting profits royalty (APR), whichever is the greater in any given year.

The royalty rates are either:

- 5 per cent AVR, that is 5 per cent of the net revenues obtained from the sale of petroleum

  or

- 20 per cent APR, that is 20 per cent of the accounting profit of petroleum production

Existing Rights

Petroleum Prospecting and Mining Licences/Permits granted under previous regimes continue in operation together with Petroleum Exploration Permits granted in 1992 and 1993 under the Crown Minerals Act. Conditions applying to these licences remain unchanged.

Transfers and Farm-ins

Transfers and Farm-ins (Assignments of Interests) to granted permits and licences are another option for obtaining an investment interest in petroleum exploration or mining. There are minimal restrictions on transfers of interest in permits or licences provided that it is considered the farm-in party will fulfil the conditions of the granted right

For further information on New Zealand petroleum permits contact Clyde Bennett, Senior Geologist, Petroleum Business Unit, Crown Minerals

National Energy Policy Council Act, BE 2535 (1992) of Thailand

NATIONAL ENERGY POLICY COUNCIL ACT,B.E. 2535 (1992) (page 1/4)

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Translation

**NATIONAL ENERGY POLICY COUNCIL ACT,
B.E. 2535 (1992)**

BHUMIBOL ADULYADEJ REX.;
Given on the 3rd Day of February B.E. 2535;
Being the 47th Year of the Present Reign.

His Majesty King Bhumibol Adulyadej is graciously pleased to proclaim that:

Whereas it is expedient to have the law on the National Energy Policy Council;

Be it, therefore, enacted by the King, by and with the advice and consent of the National Legislative Assembly acting in the capacity of the National Assembly, as follows:

Section 1. This Act is called the "National Energy Policy Council Act, B.E. 253".

Section 2. This Act shall come into force as from the day following the date of its publication in the Government Gazette.*

Section 3. All other laws, by-laws and regulations in so far as they have already been provided in this Act or are contrary to or inconsistent with the provisions of this Act shall be replaced by this Act.

Section 4. In this Act:

"energy" means an ability to perform the work inherent in the sources capable of generating powers, which are renewable energy and non-renewable energy, and shall include the sources which may generate powers such as fuel, heat, and electricity;

"renewable energy" includes energy obtained from wood, firewood, paddy husk, bagasse, biomass, hydropower. solar power, geothermal power, wind power, and waves and tides;

"non-renewable energy" includes energy obtained from coal, oil shale, tar sands, crude oil, oil, natural gas and nuclear power;

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*Published in the Government Gazette Vo1. 109, Part 9, deated 12thFebruary B.E. 2535 (1992).

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NATIONAL ENERGY POLICY COUNCIL ACT,B.E. 2535 (1992)(page 2/4)

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"fuel" includes coal, oil shale, tar sand. oil, natural gas, fuel gas, synfuel, wood, firewood, paddy husk, bagasse, garbage and other sources as prescribed by the National Energy Policy Council and published in the Government Gazette.

Section 5. There shall be the National Energy Policy Council consisting of the Prime Minister as Chairman, a Deputy Prime Minister designated by the Prime Minister as Vice-Chairman, Deputy Prime Ministers, a Minister Attached to the Office of the Prime Minister designated by the Prime Minister, Minister of Defence, Minister of Finance, Minister of Foreign Affairs, Minister of Agriculture and Cooperatives, Minister of Transport and Communications, Minister of Commerce, Minister of Interior, Minister of Science, Technology and Energy, Minister of Industry, Permanent Secretary for Industry, Secretary-General of the Council of State, Secretary-General of the National Economic and Social Development Board, Director of the Bureau of the Budget and Director-General of the Department of Energy Development and Promotion. as members. The Secretarv-General of the National Enerqv

Policy Council shall be member and secretary.

Section 6. The National Energy Policy Council shall have the following powers and duties:

(1) to submit the National Energy Policy and the National Energy Management and Development Plan to the Council of Ministers;

(2) to lay down rules and conditions for prescribing the price of energy in accordance with the National Energy Policy and the National Energy Management and Development Plan;

(3) to monitor, supervise, coordinate, support and expedite the operations of all committees with the powers and duties related to energy, Government agencies, State enterprises and the private sector related to energy in order that their operations shall be in accordance with the National Energy Policy and the National Management and Development Plan;

(4) to evaluate the results of the implementation of the National Energy Policy and the National Management and Development Plan;

(5) to perform other functions as entrusted by the Prime Minister or the Council of Ministers.

Section 7. At a meeting of the National Energy Policy Council, the presence of not less than one-half of the total number of members is required to constitute a quorum.

At any meeting, if the Chairman does not attend or is not present, the Vice-Chairman shall preside over the meeting. If the Chairman and the

Vice-Chairman do not attend or are not present at the meeting, the members present shall elect one among themselves to preside over the meeting.

Section 8. The decision of the meeting shall be made by a majority of votes. Each member shall have one vote; in case of an equality of votes, the person presiding over the meeting shall have an additional vote as casting vote.

Section 9. The National Energy Policy Council may appoint one or more committees to consider any matter or to carry out any act as entrusted by the National Energy Policy Council.

The committees under paragraph one may appoint one or more sub-committees to consider any matter or to carry out any act as entrusted by the committees.

Section 7 and section 8 shall apply mutatis mutandis to the meetings of the committees under paragraph one and the sub-committees under paragraph two.

Section 10. There shall be established the Office of the National Energy Policy Council having the following powers and duties:

(1) to study and analyse the National Energy Policy and National Management and Development Plan for submission to the National Energy Policy Council;

(2) to monitor and evaluate, and to act as a coordinating and support centre for the implementation of the National Energy Policy and the National Management and Development Plan;

(3) to collect data, to monitor the changing situation of energy, to analyse the trend and evaluate the anticipatory impact for the purpose of preparing the proposals in respect of the National Energy Policy and the National Management and Development Plan, and to disseminate, statistics related to energy;

(4) to perform other functions as entrusted by the Prime Minister or the National Energy Policy Council.

Section 11. In the performance of the functions of the Office of the National Energy Policy Council under section 10, the Office of the National Energy Policy Council may request a Ministry, Sub-Ministry, Department, local administration, State enterprise or any person to submit particulars on technical, financial or statistical matters and other matters as necessary in relation to the National Energy Policy and the National Management and

Development Plan.

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NATIONAL ENERGY POLICY COUNCIL ACT,B.E. 2535 (1992)(page 4/4)

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Section 12. The National Energy Policy Council or the Office of the National Energy Policy Council may invite any person to give statements of fact or explanations, opinions or recommendations as it thinks fit.

Section 13. There shall be Secretary-General of the National Energy Policy Council with the powers and duties to generally supervise the performance of official affairs of the Office of the National Energy Policy Council. He shall be responsible directly to the Prime Minister and shall be the superior official of the Office of the National Energy Policy.

There shall be Deputy Secretary-General of the National Energy Policy Council and there may be Assistant Secretary-General of the National Energy Policy Council to assist the Secretary-General in the performance of official duties.

The Secretary-General of the National Energy Policy Council, Deputy Secretary-General of the National Energy Policy Council and Assistant Secretary-General of the National Energy Policy Council shall be ordinary government officials.

Section 14. The Prime Minister shall have charge and control of the execution of this Act.

Countersigned by:
Anand Panyarachun
Prime Minister

Certified correct translation

(Pornthip Jala)
Office of the Council of State

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ACT ON OFFENCES RELATING TO OFFSHORE PETROLEUM PRODUCTION PLACES, B.E. 2530 (1987) (page 1/7)

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Translation

ACT ON OFFENCES RELATING TO OFFSHORE PETROLEUM PRODUCTION PLACES, B.E. 2530 (1987)

BHUMIBOL ADULYADEJ, REX.
Given on the 31st Day of October B.E. 2530;
Being the 42nd Year of the present Reign.

His Majesty King Bhumibol Adulyadej is graciously pleased to proclaim that:

Whereas it is expedient to have a law on offences relation to offshore petroleum production places;

Be it, therefore, enacted by the King, by and with the advice and consent of the National Assembly, as follows:

Section 1. This Act is called the "Act on offences Relating to Offshore Petroleum Production Places, B.E. 2530".

Section 2. This Act shall come into force as from the day following the date of its publication in the Government Gazette.*

Section 3. All other laws, by-laws and regulations in so far as they deal with matters provided herein or are contrary hereto or inconsistent herewith shall be replaced by this Act.

Section 4. In this Act:

"petroleum" means petroleum under the law on petroleum;

"offshore petroleum production place" means single or more installations constructed or installed temporarily or permanently in the exclusive economic zone or the continental shelf of the Kingdom of Thailand for the purposes of producing or facilitating the production of petroleum, and includes a ship, floating platform or any other structure existing regularly and being part of the production of petroleum or facilitating the production thereof in the exclusive economic zone or the continental shelf;

"safety zone" means the zone surrounding an offshore petroleum production place at the distance of five hundred metres as measured from each point of the outer edge of the offshore petroleum production place in accordance with international law;

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*Published in the Government Gazette Vo1. 104, Part 224, Special issue, dated 6 November 2530 (1987)

ACT ON OFFENCES RELATING TO OFFSHORE PETROLEUM PRODUCTION PLACES, B.E. 2530 (1987) (page 2/7)

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"preliminary investigation and inquiry" means a search for facts and evidence, the collection of evidence or other proceedings conducted by the naval official according to the provisions of this Act in connection with and alleged offence, for the purpose of ascertaining the facts or the particulars of the offence or establishing the guilt or securing the delivery of the offender to the inquiry official;

"sabotage" means an act of sabotage under the law on civil defence;

"naval official" means the naval commissioned officer holding the position of the Commanding Officer, Commander of Task Unit,

Commander of Task Group, Commander of Task Force, Commander of Royal Thai Marine Corps, Commander-in-Chief of Royal Thai Fleet or Commander-in Chief of the Royal Thai Navy or other positions published in the Government Gazette by the Commander-in Chief of the Royal Thai Navy as the equivalent thereof, and the naval commissioned officers specifically appointed and published in the Government Gazette by the Commander-in Chief of the Royal Thai Navy.

Section 5. The Ministry of Industry shall have the power to issue the Notifications:

(1) determining or cancelling the locations and the safety zones of the offshore petroleum production places;

(2) determining or cancelling the zones of pipelines including the accessories thereof utilized in the petroleum production process which link the offshore petroleum production places outside the safety zones.

The Notifications under paragraph one shall be published in the Government Gazette.

Section 6. The offshore petroleum production place and the safety zone shall be deemed to be located within the Kingdom.

The commission of an offence under Thai laws occurring on, over or under an offshore petroleum production place or in a safety zone shall be deemed to be committed within the Kingdom.

The inquiry official under the Criminal Procedure Code shall have the power to hold an inquiry in all the criminal cases under paragraph two. An inquiry official of which locality will be the responsible inquiry official for conducting the inquiry shall be prescribed in the Notification of the Minister of Interior.

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ACT ON OFFENCES RELATING TO OFFSHORE PETROLEUM PRODUCTION PLACES, B.E. 2530 (1987) (page 3/7)

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Section 7. The naval official shall have the power to conduct the preliminary investigation and inquiry for preventing and suppressing the acts constituting sabotage against an offshore petroleum production place.

Section 8. For the benefit of the performance of the duty under section 7, the naval official shall have the power to conduct the preliminary investigation and inquiry in regard to the acts constituting the following offences under the Penal Code which have been committed on, over or under the offshore petroleum production places or in the safety zones:

(1) offences relating to public administration as provided in section 136 to section 146;

(2) offences relating to public peace as provided in section 209 to section 216;

(3) offences relating to public security as provided in section 217 to section 226 and section 231;

(4) offences against life and body as provided in section 288 to section 290 and section 295 to section 298;

(5) offences against liberty and reputation as provided in section 303, section 310, section 313 to section 315 and section 322 to section 324;

(6) offences against property as provided in section 334, section 355, section 336 to section 339, section 340, section 340 ter, section 357 to section 360, section 362, section 364 and section 365.

Section 9. Navigation in a safety zone must obtain permission in writing from the Director-General of the Department of Mineral Resources or the person entrusted by him, except in case of necessity on account of *force majeure* or coming across serious danger.

In making such permission, any condition may also be prescribed.

The provisions of paragraph one shall not apply to the ships of the Government, the ships of a petroleum concessionaire in such locality and the ships of a contractor who has concluded an overall contract with a petroleum concessionaire in such locality.

Section 10. In the case where the zone of pipelines including the accessories thereof utilized in the petroleum production process under section 5(2) is determined in the Notification or where the area of the petroleum pipeline system under the law on Petroleum Authority of Thailand has been announced, no person shall drop or drag an anchor or carry out any act likely to endanger the pipelines utilized in the petroleum production process, or the pipelines utilized in the petroleum transport system from an

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ACT ON OFFENCES RELATING TO OFFSHORE PETROLEUM PRODUCTION PLACES, B.E. 2530 (1987) (page 4/7)

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offshore petroleum production place to onshore, or the pipelines utilized in or being part of the petroleum production process which link the offshore petroleum production places and which are located outside the safety zones, including the accessories thereof.

A person shall not navigate across the pipelines or the accessories thereof under paragraph one without showing anchor above water to such an extent that it can be seen.

The commission of an offence under this section shall be deemed to be committed within the Kingdom.

Section 6 paragraph three shall apply *mutatis mutandis* to an inquiry in regard to the commission of an offence under this section.

Section 11. The naval official shall have the power to conduct the preliminary investigation and inquiry in regard to the commission of an offence under section 9 or section 10.

Section 12. The naval official shall have the power to order or force the ship or the aircraft used or having a reasonable ground to suspect that it will be used or has been used in a sabotage against an offshore petroleum production place, or the ship or aircraft used or having a reasonable ground to suspect that it has been used in the commission of an offence under section 8, or the ship which has violated or has a reasonable ground to suspect that it has violated section 9 or section 10 to stop or proceed to any place or to land on any airport or on any temporary taking-off and landing site.

In case of necessity for the execution of an act under paragraph one, the naval official shall have the power to use the arms equipped in his ship or to use the aircraft for such enforcement.

Section 13. After the naval official has ordered or forced the ship or the aircraft to stop or proceed to any place or to land on any airport or on any temporary taking-off and landing site under section 12, the naval official shall have the power to do the following acts against the ship or the aircraft, the commander thereof and the persons therein:

(1) to inspect and search the ship and the aircraft;

(2) to inquire the commander thereof and the persons therein;

(3) if the inspection and search of the ship or the aircraft or the inquiry indicates a reasonable ground to suspect that a sabotage will be committed or has been committed or that an offence under section 8 has been committed or section 9 or section 10 has been violated, the naval official shall have the power to keep in custody the alleged offender in such offence for inquiry as well as to seize the ship or the aircraft and the articles which will be used or have been used in the commission of the offence.

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ACT ON OFFENCES RELATING TO OFFSHORE PETROLEUM PRODUCTION PLACES, B.E. 2530 (1987) (page 5/7)

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The ship or the aircraft, the commander thereof or the persons therein shall not be kept in custody longer than is necessary according to the

circumstances of the case.

Section 14. The naval official shall have the power of hot pursuit of a foreign ship when there is a reasonable ground to believe that such ship has been used in a sabotage against an offshore petroleum production place or in the commission of an offence under section 8 or in the violation of section 9 or section 10.

Only the warships or the military aircraft, or the ships or the aircraft being on Government service, conspicuously marked and authorized by the Commander-in-Chief of the Royal Thai Navy or the person entrusted by him are entitled to exercise the right of hot pursuit.

The authorization under paragraph two may be made in writing or orally or may prescribe any condition.

Section 15. The hot pursuit by the warships or the ships under section 14 paragraph two must be undertaken in order to force such ship to stop or proceed to any place in accordance with the following rules:

(1) the hot pursuit shall be commenced only if the foreign ship or any small boats thereof or another ship working jointly with a foreign ship and using the foreign ship as a mother ship is within the safety zone;

(2) the pursuing ship has given the stop sign, visible or audible, at a distance which the foreign ship is able to see or hear such sign, but it is not necessary that at the time of giving the order to stop, the ship giving such order shall be within the maritime zones of the Kingdom;

(3) the hot pursuit may be continued outside the maritime zones of the Kingdom, if the hot pursuit has not been interrupted; provided that, it shall cease as soon as the ship pursued enters the territorial sea of any other State.

Section 16. The hot pursuit by the military aircraft or the aircraft under section 14 paragraph two shall be in accordance with the following rules:

(1) the provisions of section 15 shall apply *mutatis mutandis;*

(2) the aircraft giving the order to a stop must itself pursue such ship in order to force it to stop or proceed to any place or pursue it until a warship or military aircraft, or a ship or aircraft under section 14 paragraph two, summoned by the pursuing aircraft, arrives to take over the pursuit in order to force such ship to stop or proceed to any place. The hot pursuit shall not be undertaken, if the aircraft which is about to pursue merely sees the ship committing an offence or suspects that the offence has been committed without

issuing the order to stop and making an uninterrupted hot pursuit by such aircraft or other aircraft or ships.

Section 17. In case of necessity for the benefit of an inquiry, the naval official or the inquiry official shall have the power to escort the ship kept in custody across the exclusive economic zone of any State or the high sea to any place without giving rise to a claim for the release of such escorted ship.

Section 18. After the naval official has performed the act necessary for the execution of duty under section 13, he shall deliver the alleged offender together with the articles seized and all the notes relevant to the case to the inquiry official without delay, unless such articles are the ships or the aircraft or other articles of which the inquiry official cannot maintain the storage; in such case, the naval official shall seize them on behalf of the inquiry official.

The inquiry official or the naval official shall seize the articles under paragraph one until a final non-prosecution order is issued or until the case becomes final. If the articles under paragraph one are perishable, or the storage thereof involves the risk of damage or unreasonable costs of maintenance, the inquiry official or the naval official, as the case may be, shall prepare an inventory and sell them by auction or dispose them of by other modes as he may think fit. The net proceeds after deducting the operating costs, shall be seized in place of the articles.

Section 19. If it appears from the preliminary investigation and inquiry that the commander of the ship or aircraft and the persons therein did not commit any act constituting a sabotage against an offshore petroleum production place or did not commit the offence under section 8 or did not violate section 9 or section 10, the naval official shall release the ship or the aircraft and the commander thereof as well as the persons therein without delay.

In the case where the naval official has acted in good faith, the charge and costs arising from the storage of the ships, the aircraft or other articles seized shall be borne by the commander or the owner thereof.

Section 20. The performance of duties for preventing and suppressing an act constituting a sabotage under this Act shall not give rise to a claim to damages or compensation for any person.

Section 21. In the performance of duties under this Act, the naval official shall have the same powers and duties as those of the superior administrative or police official and the inquiry official under the Criminal Procedure Code.

ACT ON OFFENCES RELATING TO OFFSHORE PETROLEUM PRODUCTION PLACES, B.E. 2530 (1987) (page 7/7)

Section 22. In the case where the naval official delivers the alleged offender to the inquiry official for further proceedings in accordance with his power and duty, the time during which the alleged offender was dept in custody prior to such delivery shall not be included in the period for keeping the alleged offender in custody by the inquiry official under the Criminal Procedure Code.

Section 23. The offences as provided by this Act shall be tried and adjudicated by the Criminal Court; provided that, if the inquiry has been conducted in a locality within the jurisdiction of any Court, the case may also be tried and adjudicated by such Court.

Section 24. Any person who fails to comply with section 9 paragraph one or fails to comply with the conditions prescribed in the permission under section 9 paragraph two shall be liable to imprisonment for a term not exceeding six months or a fine not exceeding fifty thousand Baht or to both.

Section 25. Any person who violates section 10 paragraph one shall be liable to imprisonment for a term not exceeding one year or to a fine not exceeding one hundred thousand Baht or to both.

If the commission of such offence causes the destruction, damage, depreciation in value or uselessness of the pipelines or the accessories thereof, the offender shall be liable to imprisonment for a term not exceeding ten years or to a fine not exceeding one million Bath or to both.

Section 26. Any person who violates section 10 paragraph two shall be liable to imprisonment for a term not exceeding six months or to a fine not exceeding fifty thousand Baht or to both.

If the commission of the offence causes the destruction, damage, depreciation in value or uselessness of the pipelines or the accessories thereof, the offender shall be liable to imprisonment for a term not exceeding five years or the a fine not exceeding five hundred thousand Baht or to both.

Section 27. The Minister of Defence, the Minister of Interior and the Minister of Industry shall have charge and control of the execution of this Act in so far as the powers and duties of each Ministry are concerned.

Countersigned by:

General P. Tinsulanonda
Prime Minister

Certified correct translation

(Rongphol Charoenphandhu)
Office of the Council of State

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Petroleum Law of the Mongolian People's Republic

Unofficial translation

PETROLEUM LAW
OF THE MONGOLIAN PEOPLE'S REPUBLIC

SECTION I
GENERAL PROVISIONS

Article 1. Objectives of the Law.

The objective of this Law shall be the regulation of the relations connected with the operations of Mongolian or foreign companies or individuals related to the exploration, protection, processing, transportation, storage and marketing of Petroleum occurring in the entrails of the earth in the MPR.

Article 2. Definitions of the Law.

1. "Petroleum" means liquid petroleum and different compounds of hydrocarbons in a gaseous or solid state occurring in the entrails of the earth and which may be produced in association with or separately.

2. "Petroleum Operations" means the operations related to the exploration, protection, production, processing, transportation, storage and marketing of Petroleum.

3. "Petroleum Administration" means an organisation authorised by the MPR Government to enter into Contracts related to Petroleum Operations and exercise supervision over implementation thereof.

4. "Contractor" means Mongolian or foreign companies or individuals who entered into Contracts with the Petroleum Administration to carry out Petroleum Operations on the MPR territory.

Article 3. Ownership of petroleum.

All Petroleum occurring in the entrails of the earth in the MPR shall be exclusively the property of the State.

Article 4. State management of petroleum operations.

1. Petroleum Operations on the MPR territory shall be carried out subject to the permit of the MPR Government and Petroleum Administration.

2. The MPR Government may decide to prohibit or restrict production of Petroleum on any part of its territory for reasons of national security, prevention of damage to oil field-natural reservoirs, population, protection of relics of historical and cultural importance.

3. The Petroleum Administration shall have the sole right to draw up the petroleum exploration Work Programme and exercise supervision over the implementation of this Law.

4. The MPR Government shall enact the regulations for the implementation of this Law.

Article 5. Status of a Contractor.

Unless the international treaties the MPR is a Party to otherwise requires, a foreign Contractor shall be under the protection of the MPR Laws and obliged to abide by the MPR Laws and to meet its Contractual commitments equally with any legal person or citizen of the MPR.

SECTION II
PETROLEUM OPERATIONS

Article 6. Basic requirements of Petroleum Contracts.

Petroleum Contracts shall meet the following basic requirements:

1. Use of machinery and technology capable to produce not less than 20 per cent of the field

resources occurring in the entrails of the earth;

2. Respect the foundation and development of the petroleum processing industry in the MPR;

3. Work out a problem of training of qualified personnel and employment of expatriates;

4. Use in the Petroleum Operations the machinery and technology of high economic efficienc and avoiding disturbance of reasonable balance of ecology;

5. Submit to the Petroleum Administration all original information, data and reports related to Petroleum Operations;

6. Take necessary measures to provide security of population, to protect the life and health of personnel, to prevent accidents, avoid damage to property, natural resources, earth, its entrails, ecology, and restore the used areas.

Article 7. Grant of tenure to a Contractor.

1. For the purposes of conducting Petroleum Operations the local authorities shall grant land tenure permit, and the Government shall grant mine tenure permit.

2. Exploration and production of Petroleum beyond the bound of permitted tenure shall be prohibited.

Article 8. Term of a Contractor's operations.

1. The term of the exploration period shall be up to 5 years.

2. The Petroleum Administration may upon mutual agreement with a Contractor on the relevant terms and conditions extend the term of the exploration period 2 times for 2 years each time.

3. The term of the oil field development may remain in effect for the period of up to 20 years beginning on the day the Petroleum Administration decided to permit the production of Petroleum.

4. In case a Contractor sets up additional industrial infrastructure such as building up processing plants and oil and natural gas pipelines the Petroleum Administration may extend the term of the field development 2 times for not more than 5 years each time.

Article 9. Royalty, taxation levied on a Contractor.

1. A Contractor shall pay the State royalty for production of Petroleum. The MPR Government shall fix the amount of royalty. When the Production Sharing Contract is the case the amount of royalty for production of Petroleum may be included into production sharing calculations.

2. A Contractor carrying out Petroleum Operations shall be subject to taxation according to the rates set forth in the MPR Laws.

3. The MPR Government shall fix the method of payment of royalty for production of Petroleum and taxes, based on suggestions of both a Contractor and the Petroleum Administration.

Article 10. Production Sharing.

1. A Contractor shall share with the Petroleum Administration the remaining part of the total production after royalty for production and the amount of Petroleum for Cost Recovery have been deducted. The percentage shares shall be negotiated by reference to the daily production rate and fixed in the Petroleum Contract.

2. A Contractor may export its share of Petroleum.

3. The Petroleum Administration shall be entitled to request a Contractor to deliver its share of Petroleum for the MPR domestic consumption.

Article 11. Cost Recovery.

In case a Contractor commenced commercial production of Petroleum it shall be entitled to recover its Petroleum Operations costs. The amount of oil a Contractor may use to recover these costs shall not exceed 40 per cent of the total annual production.

Article 12. Exemption from customs duties.

Unless the MPR Customs Law otherwise requires, a Contractor shall be exempted from customs duties in the following cases:

1. Import through the MPR frontier of equipment, materials and raw materials necessary for Petroleum Operations;

2. Re-export of equipment temporarily imported into the MPR for Petroleum Operations;

3. Export of a Contractor's share of Petroleum out of the MPR.

SECTION III
ARBITRATION, LIABILITIES

Article 13. Arbitration Clause.

1. Unless a Petroleum Contract otherwise requires, any property dispute arising out in the course of Petroleum Operations shall be settled by the MPR court under the MPR Laws.

2. Any dispute related to a Petroleum Contract, such as modification of the Petroleum Contract terms or invalidity thereof, may be settled upon the request of the Parties concerned in accordance with the UNCITRAL Arbitration Rules.

Article 14. Liabilities.

1. If any person arbitrarily or without sanctions conducts Petroleum Operations in the MPR, the authorised organisation shall confiscate in favour of the State income the equipment used in such operations, the property, the Petroleum produced and the income of the person involved. In case the said operations are of criminal nature the issue shall be subject to the jurisdiction of the MPR court.

2. If a Contractor undertakes any operations contrary to the provisions of this Law or other appropriate Laws of the MPR, which violations shall result in damage to the organisations or individuals, it shall be liable under the MPR Laws.

3. The damage resulted from violation of contractual obligations by any of Contractors shall be recovered, according to the Contract and/or MPR Laws, by the guilty Party.

Article 15. Term this Law enters into force

This Law shall enter into force on the day the President of the MPR shall ratify it.

An article on energy sector overview in Japan

Energy in Japan

1. OVERVIEW

1-1 Japan's Energy Policy Targets and Goals

The underlying goal of Japan's energy policy is to attain the 3Es, energy security, economic growth and environmental protection simultaneously.
By way of concrete guidelines to achieve these goals, the Advisory Committee for Energy, an advisory body to the Minister of International Trade and Industry, drew up a long-term energy supply-demand,outlook in June 1994. Specifically, in terms of demand, the outlook points out that the annual energy consumption growth must be kept at about 1% until the year 2010 by stepping up energy conservation measures. On the supply side, the outlook states that Japan must reduce its dependency on oil to about 48% by the year 2010, achieved by promoting the use of nuclear power and non-fossil energy sources such as renewable energy and natural gas, which are outstanding power sources from environmental standpoints.
Only by fulfilling this long-term energy supply-demand outlook can Japan meet the goal of curbing carbon dioxide emissions outlined in the Action Program to Arrest Global Warming.

(1) Energy Security-Secure Stable Energy Supply

At present, Japan depends on imports for more than 80% of its energy supply, and in fact, imports almost all of its petroleum. This is an extremely high percentage for an industrialized nation.
Japan recognized the fragility of its energy supply structure during the two oil crises. Hence, one of the most important issues in Japan's energy policy is to secure a stable supply of energy, which is indispensable to the daily life of its citizens and its industrial activity.
To achieve its goal, Japan has put into effect following policies,

to encourage the introduction of alternative energy
to promote energy-conservation measures.
to decrease dependence of petroleum (80% in 1st Oil crises 56% in 1995)
to diversify its sources of energy from the Middle East
to coop with the International Energy Agency
stockpiles petroleum and maintain other emergency response measures
in accordance with the international agreement.

<future measures>
to stabilize the demand of energy
to secure a supply of other energy sources such as coal, natural gas, LPG
to further diversify the sources of supply.
to coop with petroleum-producing countries closely
to promote natural gas development
to establish a coal supply structure.
to promote the establishment of nuclear power generation

Internationally, rapidly growing demand in the Asian region in recent years is beginning to have a great impact on the world energy supply and demand situation and on the global environment.

<THE INTERNATIONAL ENERGY SUBCOMMITTEE>
In June 1995, the International Energy Subcommittee of the Advisory Committee for Energy, which is an advisory body to the Minister of International Trade and Industry, put together an interim report. This report predicts that as the appetite for primary energy in the East Asian region continues to grow, demand will be doubled from its 1992 levels by the year 2010. At this pace, energy production in the region will be unable to keep up with the demand and the result will be a noticeably increased dependence on energy sources from outside the region. The report also outlines proposals for ways in which Japan should approach the international aspect of its energy policies.

<APEC>
In May 1990, the APEC set up a working group to study energy issues. In 1995, the group compiled the APEC Action Agenda, setting forth the aim of simultaneously achieving the 3Es within the APEC region. As a forum for dialogue and discussions on energy policies among APEC member economies to simultaneously achieve the 3Es, the Asia-Pacific Energy Research Center was established in Tokyo in July 1996 under the initiative of Japan. The center is expected to foster an understanding and awareness to be shared among APEC member economies concerning the future energy supply-demand structure within the region. The center invites researchers from APEC member nations and regions to work on numerous joint projects including the APEC energy supply-demand outlook slated to be drawn up by the end of 1997. Next year, Japan will host the 3rd Meeting of APEC Energy Ministers in Okinawa. At the meeting, we will continue the work we have done so far, and engage in full-fledged policy discussions based on the outlook.If you are interested in the 3rd Meeting of APEC Energy Ministers, please see a homepage of the meeting, http://lifeserver.co.jp/APEC.

(2). Economic Growth - Promote Economic Efficiency of Energy Industry

Recently, there has been growing concern that the institutionalized framework that had supported the development of Japan's economy and the stability of the nation's affairs may be putting a damper on future development. This concern has spurred the nation to take a hard look at structural reform. In the energy field, the current system is undergoing a review based on the ideas of operating on free enterprise principles during normal times, with restrictive policies put in place only during emergencies, and of protecting the consumer by introducing the principles of competition.

<GAS> see 2.3 C
In March 1995, the revised Gas Utility Industry Law took effect. As a result, general gas suppliers and large-volume customers are able to freely negotiate conditions for supplying gas. General gas suppliers are also able to provide gas outside their distribution service areas under certain conditions.

<ELECTRICITY> see 2.3 B
In December 1995, the amended Electricity Utility Industry Law went into effect. The amendments promoted new entrants into the power generation sector, such as the Independent Power Producers who provide electricity at wholesale prices; improved tariff regulations; and introduced a system to activate wholesale wheeling; realized flexibility into the system of setting rates. As a new tariff setting schemes, the yardstick formula was introduced to encourage cost-conscious management. Under this system, all electricity and gas utility companies have revised their rates since January 1996.

<PETROLEUM> see 2.3 A
In April 1996, reforms took effect in the petroleum sector. The Provisional Measures Law on the Importation of Specific Petroleum Refined Products, which had limited importers of gasoline, light oil, and kerosene to oil refineries, was repealed. The importation of petroleum products was open to anyone as long as the importer fulfills the stockpiling requirement of at least 70 days equivalent of the previous 12 months import and the quality control obligation for environmental and safety reasons. In October 1996, the Designated Area System, which had restricted the addition of new gas stations in areas of excessive competition, was abolished.
At present, Japan is in the process of considering a further review of the regulatory systems in each of the energy fields.

(3) Environmental Protection

In October 1990, Japan decided on an action plan to prevent global warming at a meeting of cabinet ministers concerned with the protection of the global environment. The plan states that by the year 2000, Japan intends to stabilize carbon dioxide emissions per person at 1990 levels. This was also set forth as Japan's goal in the Framework Convention on Climate Change that took effect in March 1994.

<LONG-TERM ENERGY SUPPLY/DEMAND OUTLOOK>
These international and domestic frameworks provided a basis for the Energy Supply and Demand Subcommittee of the Advisory Committee for Energy to revise its long-term energy supply/demand outlook in June 1994. This outlook is an index that identifies the energy policies that will achieve the best mix of energy sources for Japan. It also indicates how Japan can achieve its goal of controlling carbon dioxide emissions. The current outlook points out that energy consumption growth must be kept to approximately one percent annually until the year 2010, through intensifying measures to save energy. On the supply side, the outlook specifies that Japan must decrease its dependency on oil to 48% by the year 2010 by promoting the use of natural gas, and non-fossil energy sources, such as renewable energy, and nuclear power, which are excellent power sources from the viewpoint of achieving the CO2 emission level.

<ACTUAL SITUATION>
Japan's final energy consumption, however, grew by more than three percent in 1994 and 1995. Meanwhile, on the supply side, the lead-time needed for sitting nuclear power plants has grown and delays have occurred in the introduction of renewable energy sources. The 1995 incident at the Monju fast-breeder reactor has caused public distrust of the nuclear power policy.

<COP3>
Turning to current international debates on the global climate changes, countries will present their action plans for how to deal with the issue after the year 2000 at the Third Conference of the Parties to the Climate Change Convention (COP3) to be held in Kyoto in December 1997.
As host nation of COP3, Japan must take every opportunity to coordinate views among the participating countries.

<THE SUBCOMMITTEE OF BASIC POLICIES DIRECTIONS>
In this context, the Subcommittee of Basic Policies Directions of the Advisory Committee for Energy discussed the shape of the energy policies of the present, as well as the energy policies for the year 2010 and beyond by developing simulations for very long-term energy supply/demand. An interim report was issued in December 1996. Parallel with the debate in this subcommittee, the Nuclear Power Subcommittee of the Advisory Committee for Energy conducted another examination of the issue of nuclear power generation. Its report was issued in January 1997.

<NEW CONSERVATION MEASURES>
In March 1997, a conference on promoting policies for conserving energy and resources, which consisted of cabinet ministers, approved an array of comprehensive energy-saving measures for the year 2000. New energy conservation measures will be aggressively introduced in all areas, manufacturing, residential/commercial use, and transportation, where there is a room for a stronger energy-saving efforts. And the government is committed to an annual follow-up review of such policies.

<THE LAW OF NEW ENERGY>

In addition, the Law on Promoting New Energy Use was promulgated in April and will take effect until October. This new law is expected to promote the use of renewable energy sources and so on in the future.

1-2 Energy Situation

1.Japan's Total Primary Energy Supply (in FY1995) was 588 Million kl crude oil equivalent.

BREAKDOWN

- **OIL 55.8%**
- **COAL 16.5%**
- **NUCLEAR 12.0%**
- **NATURAL GAS 10.8%**
- **HYDRO 3.5%**
- **GEOTHERMAL 0.2%**
- **OTHERS 1.1%**

Source:MITI

It is evident judging from the figures listed above that Japan is still heavily dependent on oil even though Japan has experienced a dramatic decline in its dependency from 77.4% in 1973 to present 55.8%.

TPES(TOTAL PRIMARY ENERGY SUPPLY)/GDP (GROSS DOMESTIC PRODUCTS).

- JAPAN 156.9
- OECD 250.3
- U.S.A. 338.0

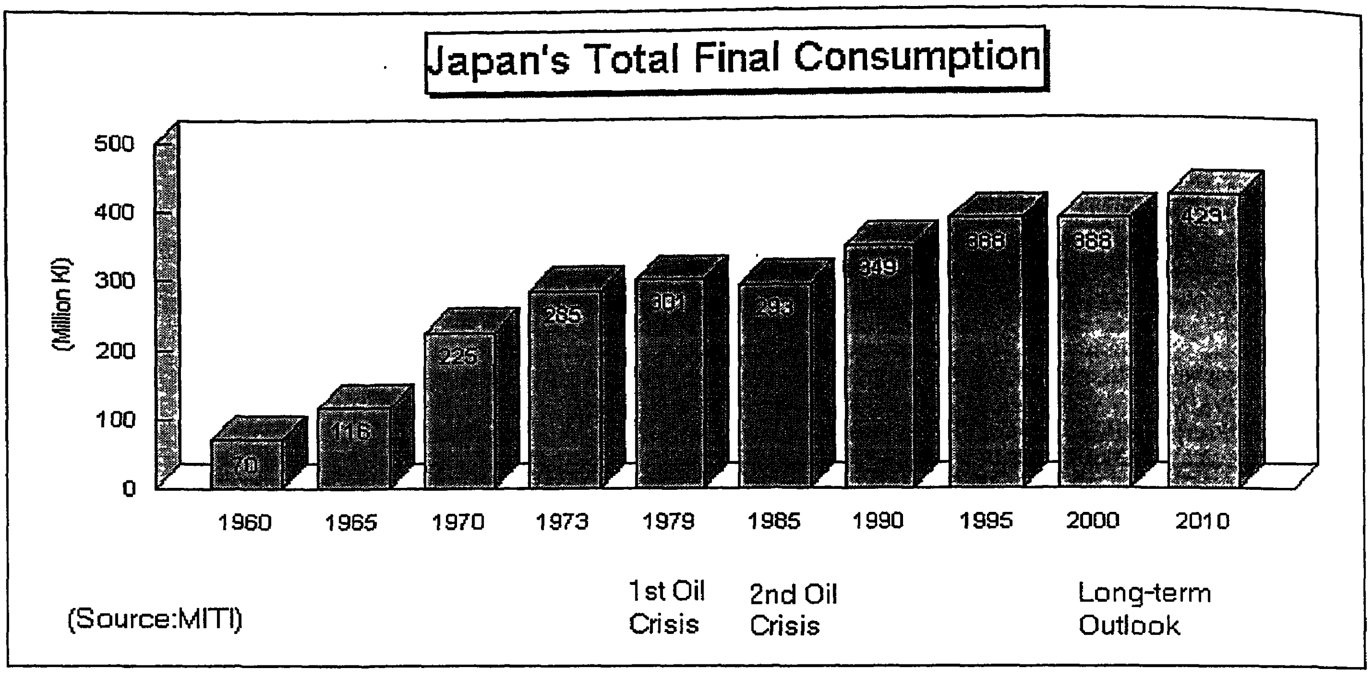
(OIL EQUIVALENT TON/ million DOLLAR)

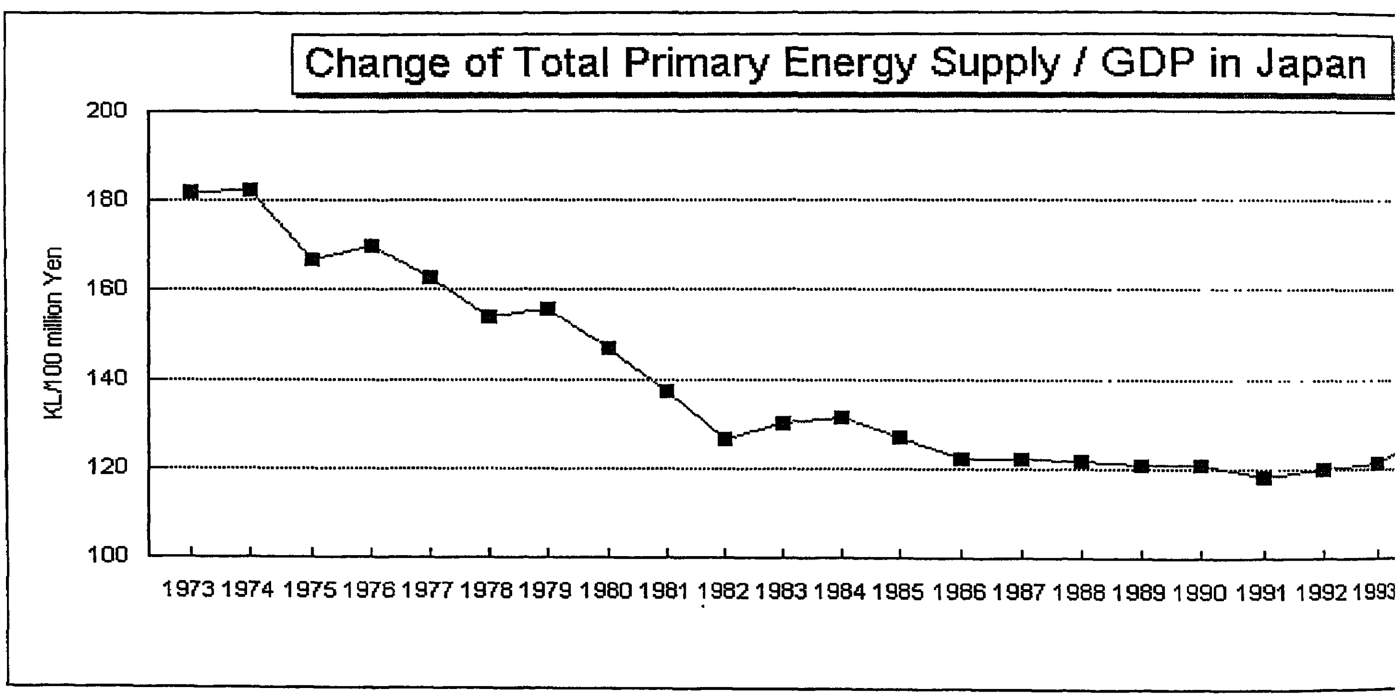
Source: IEA Energy Balances 1997

2. The above-mentioned decline in oil dependency can be mainly attributed to Japanese industries efforts in energy conservation and Japan's development of alternative energy resources.

3. A key feature of Japan's energy consumption is that the industrial sector accounts for the bulk of the total spent - 49.6% (in FY1995) compared with private sector at 26.3% and transportation sector at 24.1%

4. In 1995 Japan imported 99.7% of the oil consumed in Japan, and 78.6% of crude oil was imported from Middle Eastern countries.


Japan's Total Final Consumption
500
400
300
200
100
0
(Million Kl)
70
116
225
285
301
293
349
388
388
429
1960
1965
1970
1973
1979
1985
1990
1995
2000
2010
1st Oil Crisis
2nd Oil Crisis
Long-term Outlook
(Source:MITI)


Change of Total Primary Energy Supply / GDP in Japan
200
180
160
140
120
100
KL/100 million Yen
1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993

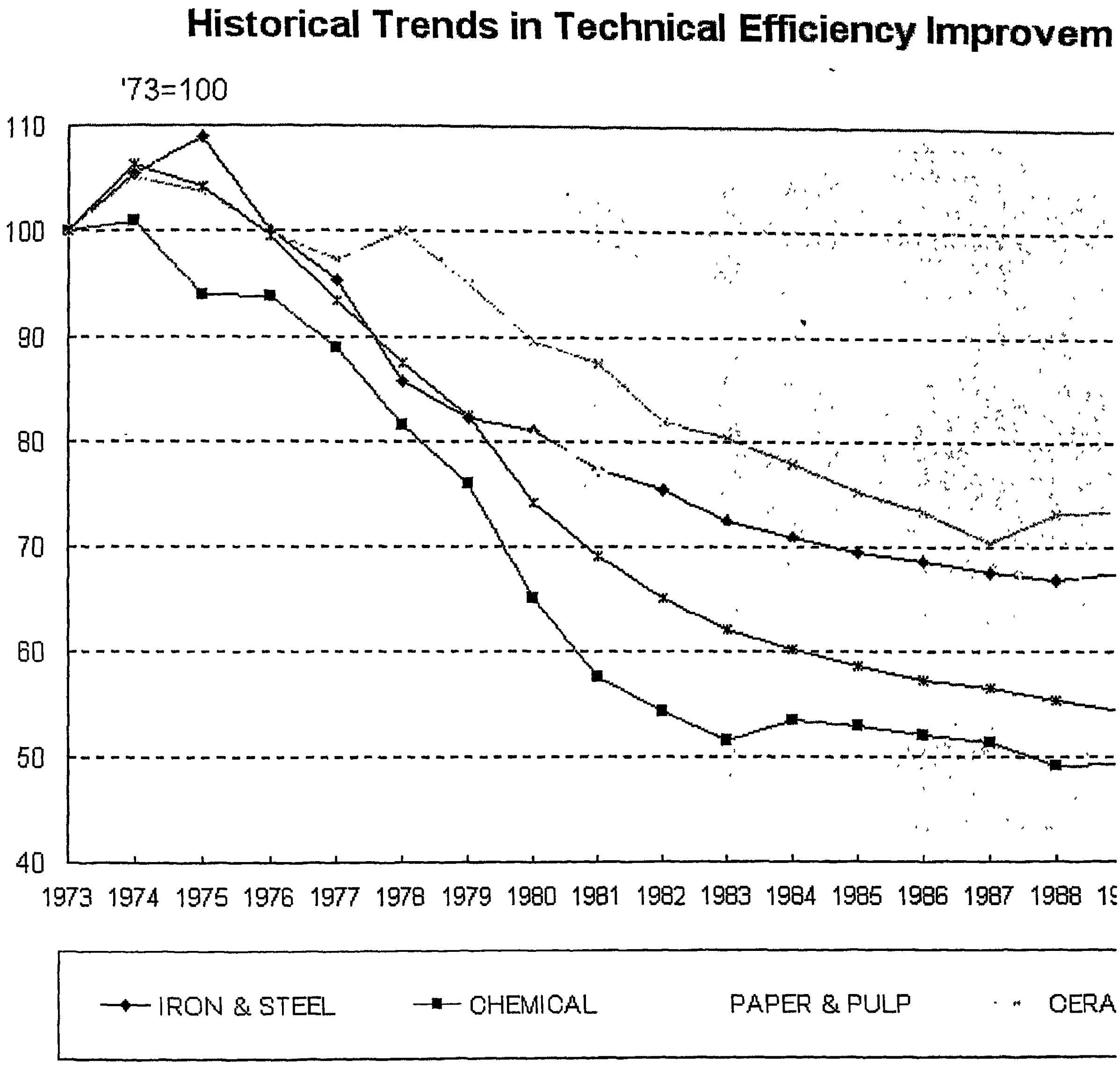


TABLE 1.1 Breakdown of Japan's Total Primary Energy Supply
(unit:%)

	1960	1965	1970	1973	1979	1985	1990	1995	2000	2010
OIL	37.6	59.6	71.9	77.4	71.5	56.3	58.3	55.8	52.9	47.7
COAL	41.2	27.0	19.9	15.5	13.8	19.4	16.6	16.5	16.4	15.4
NATURAL GAS	0.9	1.2	1.2	1.5	5.2	9.4	10.1	10.8	12.9	12.8
NUCLEAR	-	0	0.3	0.6	3.9	8.9	9.4	12.0	12.3	16.9
HYDRO	15.7	10.6	5.6	4.1	4.6	4.7	4.2	3.5	3.4	3.7
GEOTHERMAL	-	-	0	0	0.1	0.1	0.1	0.2	0.2	0.6
NEW ENERGY,etc.	4.6	1.5	1.0	0.9	1.0	1.2	1.3	1.1	2.0	3.0

(Source:MITI)

1-3 The Long-Term Energy Supply/Demand Outlook

1. The What's and Why's of the Outlook
The Long-Term Energy Supply/Demand Outlook was established by the Advisory Committee for Energy, (the advisory board of the Minister of International Trade and Industry) in order to clarify the goals and tasks of Japan's energy policy by predicting Japan's future energy supply/demand balance.

2. Background of the Latest Revision in 1994

Outlook was revised 4 years after its last revision in 1990. The changes were made in accordance with the recent developments in the world/domestic energy situation (low crude oil prices, delay in development and introduction of nuclear/new energy, etc.) and the growing concern on global environmental issues.

TABLE1.7 TOTAL PRIMARY ENERGY SUPPLY OUTLOOK

TABLE1.7 TOTAL PRIMARY ENERGY SUPPLY OUTLOOK

Fiscal Year / Item	FY1992(actual)		FY2000 Case 1		FY2000 Case 2		FY2010 Case 1		FY2010 Case 2
Primary Energy Supply	541 million s		591 million s		582 million s		662 million s		635 million
	Quantity	(%)	Quantity	(%)	Quantity	(%)	Quantity	(%)	Quantity
Oil	315 million s	58.2	316 million s	53.4	308 million s	52.9	331 million s	50.1	303 million s
Oil(LPG excepted)	295 million s	54.5	293 million s	49.5	285 million s	48.9	304 million s	46	277 million s
LPG	15.3 million t	3.7	17.7 million t	3.9	17.4 million t	3.9	20.8 million t	4.1	20.0 million t
Coal	116.3 million t	16.1	134.0 million t	16.6	130.0 million t	16.4	140.0 million t	15.3	134.0 million t
Natural Gas	40.7 million t	10.6	54.0 million t	12.8	53.0 million t	12.9	60.0 million t	12.7	58.0 million t
Nuclear	223 billion kwh (34.4 GW)	10	310 billion kwh (45.6 GW)	12.1	310 billion kwh (45.6 GW)	12.3	480 billion kwh (70.5 GW)	16.2	480 billion kwh (70.5 GW)
Hydro(conventional)	79 billion kwh (21.0 GW)	3.8	86 billion kwh (22.2 GW)	3.3	86 billion kwh (22.2 GW)	3.4	105 billion kwh (26.5 GW)	3.5	105 billion kwh (26.5 GW)
Geothermal	0.55 million s	0.1	1.0 million s	0.2	1.0 million s	0.2	3.8 million s	0.6	3.8 million s
New Energy Sources	6.7 million s	1.2	9.4 million s	1.6	12.1 million s	2	11.5 million s	1.7	19.1 million s
Total Supply	541 million s	100	591 million s	100	582 million s	100	662 million s	100	635 million s

Case 1: Business as usual (no additional energy conservation measures) scenario
Case 2: Scenario with additional measures for energy conservation and development and introduction of new energy

Case1:Business as usual (no additional energy conservation measures)scenario
Case2:Scenario with additional measures for energy conservation and development and introduction of new energy

1-4 Goals for Oil Alternative Energy Supplies

1.The Alternative Energy Supply Target was developed (Cabinet Decision, Sept.1994) with the approval of the National Energy Council of Ministers,after the issuance of the revision of " Long-Term Energy Supply / Demand Outlook " complied in June 1994.

2.The Target specifies the following:
(1)Specific types of oil-alternative energies to be developed and introduced
(2)Supply targets (in terms of volume) of above-mentioned energies
assuming; a) maximum level of understanding and effort from the private sector
b) implementation of prioritized and well-defined policy government measures
c) closer cooperation between private and government sectors
from the standpoint of "comprehensive security of energy supplies" (based on the Law Concerning The Promotion of Development and Introduction of Oil Alternative Energy [Art 3]) along with the concern over environmental protection.

3. According to the Targets, the total amount of the oil-alternative energy supply (coal,nuclear,natural gas,new energy,etc.) in FY 2010 will be equivalent to 33 billion kl oil. The share of oil alternative energy among TPES is expected to rise to 52% in FY 2010,up to 10% from FY 1992.

TABLE1.8 ALTERNATIVE ENERGY SUPPLY TARGETS

Alternative Energy Sources	Supply Targets Figures (Million kl)
Nuclear	107
Coal	98
Natural Gas	81
Hydro	23
Geothermal	4
Others	19

2. CURRENT TOPICS

2-1 Advisory Committee for Energy

a. The Interim Report of the Subcommittee of Basic Policy Directions, Advisory Committee for Energy
- Tasks of Future Energy Policies -

1. Studies made by the Advisory Committee for Energy
Over the past few years, the energy situations in Japan and overseas has remained relatively calm. The looming sense of crisis that had prevailed during the oil crises seems to be fading from people's minds.
Contrary to this superficial calmness, Japan in fact faces a number of serious problems related to energy. To realize sustainable economic growth, Japan, a country poor in natural resources, must carry out sound energy policies that include guaranteeing energy security and addressing global environmental issues.
To this end, the Subcommittee of Basic Policy Directions of the Advisory Committee for Energy, which is an advisory body to the Minister of International Trade and Industry, has been conducting extensive studies since May 1996 on the direction of future energy policies. An interim report was drawn up in December of the same year.

2. Fundamental awareness of the issues and other matters
The basic goal of Japan's energy policies is the simultaneous attainment of the 3Es- Economic Growth, Energy Security, and Environmental Protection. This is no easy task, however, as there inevitably is a trade-off among the three. To present a concrete policy goal, therefore, the Advisory Committee for Energy established a long-term energy supply-demand outlook, and is working to promote energy measures in different sectors.
Recently, Japan's energy consumption has risen sharply for two consecutive years, and if left unattended, it will be difficult to achieve the long-term energy supply-demand outlook.
Moreover, the increase in our country's energy consumption also signifies an increase in energy-related carbon dioxide emissions. If things should continue as they are now, Japan will not be able to meet its target (Action Program to Arrest Global Warming) of stabilizing per capital carbon dioxide emissions after the year 2000 to roughly the 1990 level (approximately 2.6 tons).
In addition, the growing worldwide dependency on the Middle East for oil in recent years and Asia's dramatic increase in energy demand are liable to become factors that could destabilize future energy supply-demand situations, including those of Japan. There is a danger that the latter, in particular, will have serious impacts on the environment such as global warming and acid rain.
Under these circumstances, Japan must incorporate the following perspectives when promoting energy policies:

(1) For the time being, promote additional measures related to energy conservation and new energy sources to attain the energy policy goals laid out in the long-term energy supply-demand outlook.

(2) Although nuclear power accounts for 12% of our country's energy supply and 34% of electricity supply, there is a mounting public distrust of nuclear energy policies in the wake of the prolongation of nuclear power siting and the Monju accident. Thus, re-examine how nuclear energy should be positioned.

(3) In the long run, continue research on the ideal state of future energy policies while carefully monitoring changes in the economic social structure and incorporating ultra-long-term outlooks into the energy supply-demand structure.

3. The current supply-demand outlook and measures to achieve it
For now, the following additional measures will be carried out to attain the goals which the long-term energy supply-demand outlook sets forth for the year 2000.
Energy conservation > Accumulate efforts by each sector and implement cross-sectional measures
To keep the final energy consumption in the year 2000 to the level projected in the current supply-demand outlook, the energy consumption growth rate must be suppressed to 0% after 1995.

* Additional measures
Industrial sector: Boost the application of Energy Conservation Law and encourage voluntary efforts (aim at reducing per-factory energy intensity by more than 1% each year), etc.
Public welfare sector: Improve equipment efficiency and insulation of houses and buildings, etc.
Transport sector: Improve equipment and distribution efficiency,etc.
Cross-sectional measures: Promote energy conservation activities carried out by local public organizations, convert to energy-saving lifestyles, promote energy-saving DSM, etc.

New energy sources > Step up the spread of such sources by offering concentrated support
In order for new energy sources to attain a 2.0% share in the total supply of primary energy, which is the goal specified in the current supply-demand outlook for the year 2000, the following additional measures must be carried out:
Drawing up of basic policies by the government; clarification of the role of each entity (national and local public organizations, enterprises and the general public); and providing support to new energy introduction businesses including sales of energy generated by wind power
Help make solar power generation profitable as a business
Support local public organizations' innovative activities to introduce new energy sources such as using a large number of cars that run on clean energy

Nuclear power > Promote nuclear power policies drawn up from citizens' perspectives
Work to restore people's faith in nuclear power policies by thoroughly publicizing information and by implementing regional activities aimed at the long-term development of the siting areas.

4. A very long-term simulation
Results of very long-term simulation
To make a long-term projection of Japan's energy issues, a simulation to FY2030 was conducted.
The results show that if policies for conservation and new energy introduction are drastically strengthened and the

current nuclear development plan is realized, CO2 emissions in 2030 will go down to the same level as in 1990. To simultaneously achieve the "3E's," Japan will be forced to make difficult choices concerning its energy policies, such as undertaking fundamental changes in lifestyles, bearing huge costs, and introducing regulatory measures. These are "painful" choices, and must ultimately be left to the people to decide.

5. A message from the Advisory Committee for Energy
The study conducted by the Advisory Committee for Energy identified a number of potentially serious problems in Japan's energy situation that exist despite superficial calmness, and it calls for boldly tackling these problems from both domestic and international perspectives. Moreover, the study pointed out the possibility that dealing with these problems may entail substantial sacrifice on the part of the people, at times forcing them to give up the comfortable ways of life they now enjoy, for example.
Lastly, the committee issued the following message to Japanese citizens;

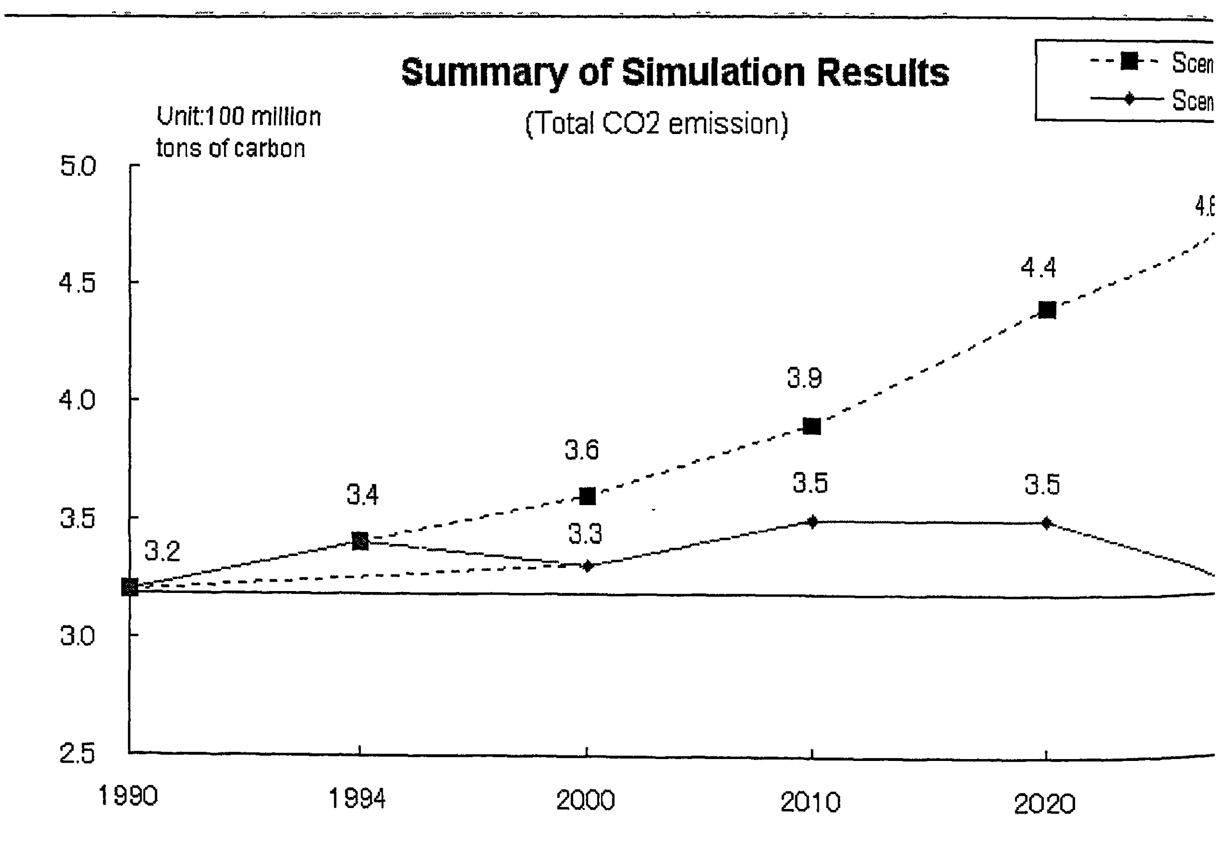
"With the 21st century just a few years away, Japan stands at a major crossroads in terms of energy. The hurdles of tasks we must surmount are by no means low, and, unless we change our lifestyles and the socio-economic system, we will not be able to overcome them. It will take some more time to come up with a clear-cut answer. What we are expected to start now, in the meantime, is for each and every one of us to re-examine our daily living from its very foundation. The Committee sincerely hopes that this report will help deepen people's understanding of the energy issues and induce active discussions and exchanges among the people."

A very long-term simulation

Scenarios that Japan will face in a trade-off among the "3E's"

Results of very long-term simulation

To make a long-term projection of Japan's energy issues, a simulation to FY2030 was conducted. The results show that Japan may be required to make some painful energy choices in the future.



Simulation scenarios and trial calculation results

	Basic assumptions	Trial caluculation results
Scenario 1	Achive a desirable economic growth rate (annual average of 2.2% from FY2011 through 2025) Carry out energy conservation and new energy measures similar to existing ones. The number of nuclear power reactors will increase by about 20, then remail constant.	Energy consumption will increase by about 1.0% annually. CO2 emission will increase dramatically to about 150% of the FY 1990 level. Reliance on oil as a source of energy will remain high, at about 48%.
Scenario 2	Achive a desirable economic growth rate (annual average of 2.2% from FY2011 through 2025) Maximaize measures associated with energy conservation (equivalent to 50 million kL) and new energies (equivalent to 80 million kL) Increase nuclear power reactor by about 50 (as a result, capacity will reach 100 million kW)	Energy consumption will increase by about 0.7% annually. CO2 emission will remain to about the FY 1990 level. Reliance on oil as a source of energy will drop to 41%.
Additional Scenario for reference	Structural economic reforms are not carried out and economic growth slows dramatically (annoual average of 0.8% annually from FY2011 through 2025) Energy conservation and new energy measures remain similar to current measures. The number of nuclear power reactors will increase by about 20, then this level will be maintained.	Energy consumption will increase by about 0.6% annually. CO2 emission will increase dramatically to about 120% of the FY 1990 level. Reliance on oil as a source of energy will remain high, at about 47%.

The burden of "pain" and making choices based on national consensus

To simultaneously achieve the "3E's," Japan will be forced to make difficult choices concerning its energy policies, such as undertaking fundamental changes in lifestyles, bearing huge costs, and introducing regulatory measures. These are "painful" choices, and must ultimately be left to the people to decide.

↓

Clarify what this "pain" means in quantitative terms (reference)

↓

Tasks for the future

People must seriously regard Japan's future energy policies as issues that affect their everyday lives and conduct discussions that involve everyone. Strengthening energy-related educational programs in schools is also important.

2-2a. The Law Concerning Promotion of the Use of New Energy

1.The need to establish a new law

1. The need to establish a new law

Environmental Changes surrounding energy policies

The growing need to guarantee energy security
Rapid expansion of energy consumption in the Asian region
Stagnation in the reduction of dependency on oil

The growing need to cope with global warming
Curbing CO2 emissions is an international ob
COP3 is being held to boost international activit

The need for new energy measures

Restricting resources and stepping up the development and introduction of environmentally-friendly new energies is essential
<Examples of new energies>
photovoltaic power generation, wind power generation, waste power generation, clean energy vehicles

Promoting the introduction of new energies

Step up the introduction of new energies which are not progressing due to economic restrictions even though such energies are ready for practical use.

Technological development

Promote further technological development based on long-terr perspectives

Clarify the basic program structure

(Clarify the roles of the Japanese people and enterprises,and systematize governmental measures

Establish a financial support schem

to help entrepreneurial activities

To be realized with the establishment of a new law

2.Legislative Plan Outline

Establishing and anouncing basic policies

Draw up and announce the basic policies for comprehensively promoting the use of new energies.

Clarification of efforts and obligations

Based on the basic policy, stipulate the obligations that energy users, energy suppliers and manufacturers/importers need to make in order to promote the use of new energies.

Draw up and announce guidelines for new energy use which include instructions and advice

Draw up and announce guidelines that outline specific steps in using new energies. The relevant minister will provide instructions and advice to energy users as required.

Consideration regarding Local Public Entities' Measures

Stipulate that when drawing up and implementing measures that help promote the use of new energies in the region, local public bodies must take the basic policy into consideration.

Support measures for enterprises using new energies

The relevant minister approves the plans (usage plans)of enterprises who use new energies and work out financial support and other measures.
(Examples of enterprises)

2-2 b. Summary of Comprehensive Energy Conservation Measures toward the Year 2000 (April, 1997)

Agency of Natural Resources and Energy

1. Background
Energy consumption continues to grow consistently in Japan because of a recovery in economic activities, movement toward information-oriented society, and changes in people's lifestyles, particularly with regard to the increases in the size of home electronics appliances and cars. If this trend continues, it would be extremely difficult for Japan to meet the long-term energy supply-demand outlook for the year 2000 and the CO2 emission targets laid down in the Action Program to Arrest Global Warming. Therefore, Japan must make maximum efforts for much promotion of energy conservation toward the year 2000 in order to achieve 0% growth in energy consumption.
In order to achieve 0% growth goals, at the Ministerial Council for Comprehensive Energy Measures which was held on April 1 with the cooperation of all ministries, the decision was reached on measures designed to promote comprehensive energy policies. Included in these measures were over 60 specific new or reinforced steps spanning all sectors, including industry, residential and commercial, and transportation.
On the basis of these measures, Government of Japan shall study and implement concrete measures to be taken and provide follow-up for them each year.

2. Major Specific Measures
(1)Industrial sector
Introduce quantitative targets at each factory (improve energy efficiency by more than 1% each year)
Based on the Energy Conservation Law, targets shall be set up for each factory or company that call for an average annual reduction of energy intensity by more than 1%. The aim is to promote voluntary energy conservation at each factory.

Strengthen instructions provided to designated factories based on the Energy Conservation Law (comprehensive inspection of all factories)
By conducting on-site surveys of energy-consuming factories designated as targets for energy management in the Energy Conservation Law, identify those factories that are not energy efficient and strengthen instructions and/or guidance offered to them.

(2)Residential and Commercial sector
Establish and promote a guidance standard on home heat insulation and other items(Next-Generation Energy Conservation Standard)
To promote the increase in the number of homes with efficient heat insulation, a guidance standard (to be tentatively called "Next-Generation Energy Conservation Standard") which will be more effective than the existing energy conservation standard for homes based on the Energy Conservation Law, will be established and announced.

Introduce energy conservation labels for use in houses and buildings
To encourage the construction and user selection of energy-conserving houses and buildings, study the introduction of an energy conservation mark that would alert the consumers, in easy to understand terms, of the energy-saving features of a particular house or a building.

Foster and support energy conservation service enterprises (ESCOs)
Energy service companies (ESCO) are new types of businesses that provide comprehensive energy conservation services to buildings and factories. To assist in the development of such companies, model contracts will be established and innovative private ESCOs will be provided with subsidies for conducting their model businesses.

Create an easy-to-understand labeling system that helps consumers identify energy-saving household electrical appliances
In the Energy Conservation Law, energy consumption efficiency must be labeled for"specified apparatuses. Studies will be conducted to improve such energy efficiency labels especially for household electrical appliances so that they are made easier to understand (creation of an energy conservation labeling system). Revised labeling systems will be implemented one by one after fiscal 1998. Introduction of labels that provide relative comparisons will also be studied.

Establish an energy conservation standard (target) for refrigerators and other appliances based on the Energy Conservation Law
By about mid-1997, add refrigerators to specified equipments in the Energy Conservation Law and establish energy conservation targets that manufacturers will be required to meet.
In addition, begin studying other consumer apparatuses so that they can also be designated as specified apparatuses.

Proliferate and promote the use of energy-saving equipments such as air conditioning systems with heat regenerators
Promote the proliferation of air conditioning systems with heat regenerators and natural gas air conditioners through support measures such as providing interest subsidies.

(3)Transportation sector
Establish an energy conservation standard (target) for diesel automobiles based on the Energy Conservation Law

Designate diesel passenger cars as "specified machineries" in the Energy Conservation Law by fiscal year 1998 and diesel trucks (heavy vehicles) by fiscal year 2000, and set up fuel consumption targets that manufacturers will be required to meet.

Draw up the "Comprehensive Plan to Facilitate Traffic Flow in Urban Areas" that controls traffic demand and facilitates traffic flow in cities
To facilitate the flow of traffic in urban areas, set up concrete targets to re-examine trips taken in cities. Establish and implement, beginning fiscal 1997 in several cities nationwide,the "Comprehensive Plan to Facilitate Traffic Flow in Urban Areas" that consists of implementing the following measures in combination: measures to expand traffic capacity, traffic demand management (TDM) measures, and multi-modal measures.

Fully implement traffic demand management (TDM) measures
Fully implement TDM measures primarily in cities that carry out comprehensive model anti-congestion measures. To encourage car users to change their transportation patterns and make traffic at the city or regional level flow more smoothly, the TDM program including the keeping of car pools, Introduction of flextime for commuting, and building of more parking spaces for introducing park-and-ride systems will be promoted.

Promote comprehensive measures to improve infrastructure, promote deregulation, enhance information exchange and standardization, and support enterprises, all of which will help improve distribution (establishment of General Principles on Comprehensive Distribution Measures)
With the establishment of the General Principles on Comprehensive Distribution Measures and with the cooperation of relevant ministries, conduct comprehensive measures to improve infrastructure and promote deregulation as well as enhance information exchange and standardization among businesses. In so doing, improve distribution efficiency and, consequently, improve energy consumption efficiency in the distribution sector.

Strengthen measures to deal with illegal parking
Build and improve parking spaces and lots, enforce tougher control on illegal parking, introduce various systems related to parking measures, and enact regulations to prevent illegal parking.

(4) Cross-sectional measures
Support innovative regional energy conservation activities carried out by local public organizations
In fiscal 1997, establish a support system with subsidies that help local public organizations promote the building of energy-efficient houses and buildings, make distribution more efficient, and encourage other energy conservation activities that should be tackled on a regional basis.

Strengthen education on energy and the environment at schools (promotion of Eco-Schools)
To construct school facilities that conserve energy and reduce negative environmental impact, implement pilot activities into the construction of energy- and environmentally-conscious schools and facilities (Eco-Schools) and contribute to the students' education concerning energy and the environment.

Fundamentally strengthen publicity on energy conservation
To further increase public awareness on energy conservation and promote specific energy conservation measures, step up publicity and PR activities through official bulletins, newspapers, magazines, television, and other publicity channels.

2-3 Deregulation
a. Petroleum

Deregulation of the Japan's Petroleum Industry

1. Priorities of Japanese Petroleum Policy

The fundamental goal of Japanese petroleum policy is to ensure a stable petroleum supply. Meanwhile, it has become another priority to realize petroleum product price levels comparable to other countries.
In addressing this issue, the internationalization of the domestic petroleum product market and the promotion of an efficient distribution system are essential. At the same time, due consideration should be given to environmental and safety concerns.

2. Deregulation of the Japanese Petrolerm Industry

Based on this assessment, we have undertaken the following structural reforms to realize an appropriate balance between stable and efficient supply of petroleum products.

(1) Liberalization of Petroleum Product Import : Repeal of Provisional Measures Law on the Importation of Specific Petroleum Refined Products The Provisional Law that designates only those who own refining facilities as importers of oil products had been effective in securing stable oil supply while maintaining a balance among various petroleum by-products of crude oil. Yet, it had consequently discouraged competition between domestically refined oil and imported one, and had impeded the efforts to correct the price levels and structure of petroleum products. Therefore, we liberalized the import of petroleum product by repealing the Provisional Law upon its expiration in March 1996, after taking the following measures regarding stockpiling and quality control.

A) Amendment of Petroleum Stockpiling Law
To prepare for an expansion of oil product importers, the Petroleum Stockpiling Law was revised so that stockpiling obligations would be shared among refiners and importers, in such a way as to appropriately respond to an emergency.

More specifically, i) every petroleum importer should assume a stockpiling obligation irrespective of the amount of products it imports ; ii) importers should, in principle, stockpile the same types of products that they import ; iii) each importer's required amounts of stockpiles each month should be based on the scale of its activities in the previous twelve months ; and iv) the government should simplify reporting procedure and average the environment necessary for smooth fulfillment of stockpiling obligations.

B) Amendment of The Gasoline Retail Business Law
To prepare for imports of petroleum products with a wide variety of quality, a new quality control system was established under the amended quality control law titled Law on the Quality Control of Gasoline and Other Fuels. This law ensures an appropriate standard for specifications beyond the control of market mechanism.
More specifically, i) minimum number of specifications which cannot be left to market mechanism such as those involving environmental, safety and health matters is controlled to maintain the current quality level ; ii) not only distributors but basic suppliers (i.e., importers and refiners) and end distributors are responsible for meeting the quality specifications of petroleum products ; and iii) a marking system is adopted whereby specific marks is displayed in service stations indicating that the products meet a certain standard.

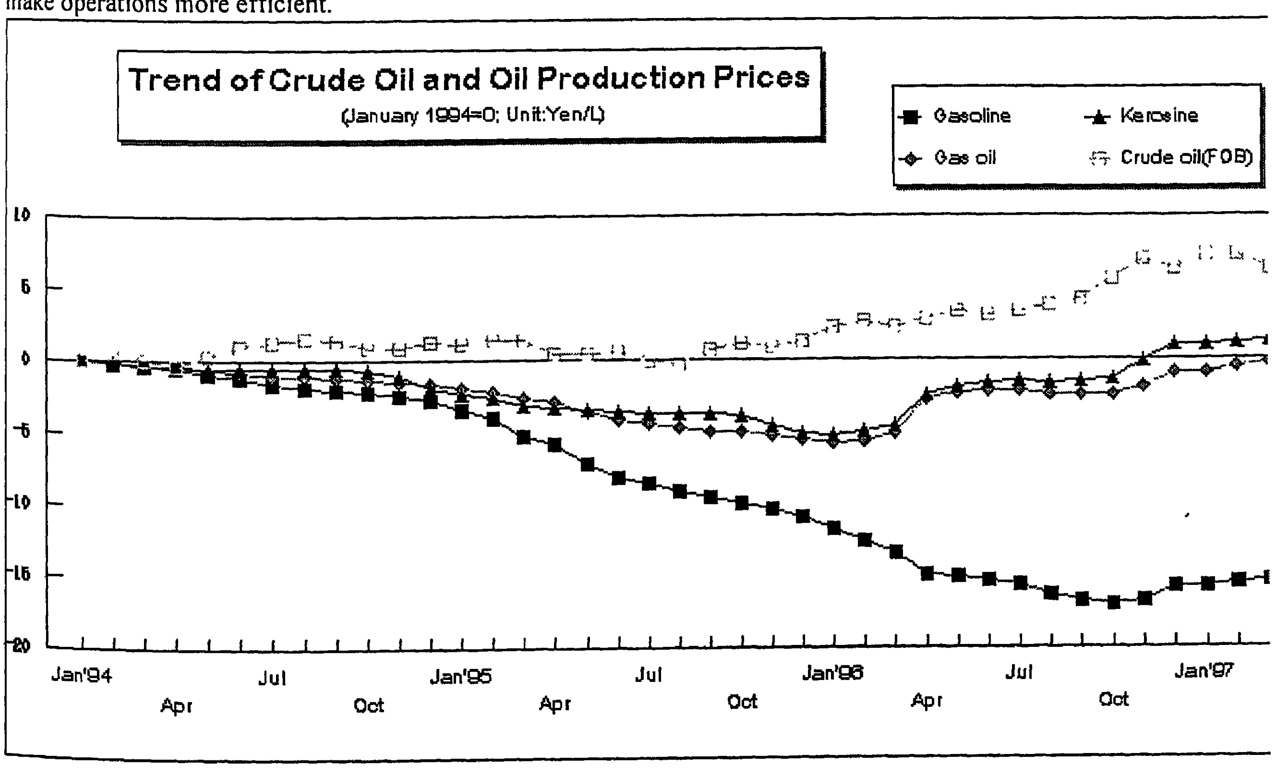
(2) Promotion of Distribution Efficiency (Abolition of Designated Area System) We have decided to gradually reduce the number of designated areas in which excessive competition is often seen. In these areas construction of service stations is restricted. Eventually the designated areas system will be abolished in October 1996.

3.Japanese Petroleum Market in the Transitional Period

Such drastic deregulation is causing significant changes in our petroleum market. Soon after we began discussing a new petroleum system, fierce competition broke out in the Japanese petroleum market as if deregulation had already taken place. As a result, prices of petroleum products fell sharply. More specifically, the retail price of gasoline fell from 122 to 106 yen per liter, a 16 yen drop. That was, without taxes, about a 25% drop. Even the prices of gas oil and kerosine, which had been kept at a lower level than that of gasoline, fell, despite the prices of crude oil rose.
Deregulation proved quite effective as newcomers, including general trading companies, began importing petroleum pedants and industry outsiders, such as large-scale commercial distributors, began retailing petroleum products. In addition, fierce competition in the market is quickly revising the unique price structure of petroleum products in Japan to conform with the international pricing structure.

4.Efforts by Japanese Petroleum Companies for Efficiency and Streamlining

As a result, the business climate in Japan for petroleum companies became quite difficult as the current profits of the refinery and wholesale sector nose-dived from $3.19 billion in fiscal 1994 to $1.89 billion in fiscal 1995 (41% down), furthermore, to $0.43 billion in the first half of fiscal 1996 (52.7% down from the first half of fiscal 1995). Their current profit ratio vis-a-vis sales amount decreased significantly from 2.26% in fiscal 1994 to 1.35% in fiscal 1995. The climate is equally tough for the distribution sector which is facing fierce challenges from newcomers from other sectors: in fiscal 1994, 39.7% of individual gas stations experienced deficit; 49.0% operated under the profit ratio of 1% or less; only 11.3% enjoyed the profit ratio above 1%. A decrease in the number of gas stations in fiscal 1995 despite the past steady increase since the beginning of 1990 reflects such a tough environment and the number of retirement of gasoline retail companies amounted to 1,531 in fiscal 1995.
To respond to such changes in the market, our petroleum industry is restructuring to achieve dramatic cost reductions, including downsizing the existing work force, reducing the number of new recruits, and logistical streamlining in order to make operations more efficient.



b. Electricity

Amendment to the Electricity Utilities Industry Law
1. Necessity of the Amendments

It is a necessity to improve the economic efficiency of the electric power supply system to secure a stable supply during the summer period. For this purpose, the Electricity Utilities Law was amended in April 1995, with the amendments taking effect in December 1995.

2. Outline of the Amendment

(1) Promoting New Entries into Power Generation Sector (IPP)
(IPP : Independent Power Producer)

(BACKGROUND)

- Opportunities for new of entry economically competitive firms run by medium/small power sources are recently expanding in high demand areas.
- It is essential 1 to facilitate appropriate measures to promote such new entries by potential entrants, and 2 to promote competition in the power generation sector.
- In addition, it is essential to form wider electricity wholesale markets by activating wholesale wheeling. (Wholesale wheeling : allowing power generating companies to utilize power utility companies' transmission line for transmitting electricity to areas outside the service area of that utility company.)

(NEW MEASURES)

1. Abolishment of the permit system in principle (except for large scale generators) for new entry of wholesale power companies (Independent Power Producer)
2. Introduction of a bidding system (for introducing equitable and transparent purchasing mechanism)
   - Bidding applied to the purchase of electricity by the general power utilities.
   - No approval is required for electricity sold in the bidding system.

FIGURE 2.5 Bidding providers and bidding scale

The scale of bids in 1996 was 2,655,000kw.
The application was approximately 4 times as much as bids. As a result, 3047,000kW was awarded.
The bidding providers in 1997, as well as the scale of their bids, are as follows.

(Operation will begin between the years 2000 and 2004)
(Unit:10,000kW)

Fiscal year/ Electric power company	2000	2001	2002	2003	2004	Total
Tokyo Electric Power com.			50	50		100
Kansai Electric Power com.					70	70
Chubu Electric Power com.				40		40
Kyushu Electric Power com.		30				30
Chugoku Electric Power com.				20		20
Tohoku Electric Power com.	0.5	15				15.5
Hokkaido Electric Power com.					10	10
						285.5

Bids called for 2,855,000kW, spread over five years, account for 10 percent of power sources developed nationwide over the same period, at approximately 5,600,000kW per year.

3 Activating wholesale wheeling

- Oblige the 9 general power utility electricity firms to organize, the terms of wheeling contract notify MITI of the organization, then publicize aforementioned.
Government may order general power utility to accept wheeling if it unjustifiably rejects wheeling requests by generators.

(2) Establishing a New Scheme for Promoting Entry into Specific Power Distribution Business

(BACKGROUND)
Opportunity for new entry into power distribution business by companies running medium/small power sources (cogeneration, etc.) in the vicinity of consuming area which are capable of supplying electricity in the specific area.

(NEW MEASURES)
- Legislatively define the above-mentioned business.
- New entry must be permitted by government, based on an examination on capability of supply stability.
- Electricity rate must be notified to government. MITI can order corrections of discriminatory supply conditions between consumers.
- Legislate supply obligation clause.

(3) Improving Price Regulation

(BACKGROUND)
The necessity to make the electricity supply more efficient through introducing competition among electric utilities has been increasingly recognized over the post few years. However, most importantly, a stable supply of electricity has been the greatest concern. Facilitating management efficiency of utilities through rate regulation has also been considered in the field of public-utility charges.

(NEW MEASURES)
Based on the background mentioned above, MITI made major reforms in the electricity rate system in 1995. The basic concept of the reforms is that operating efficiency of electric companies should not be promoted by regulation or intervention by the government but by a rate control system which encourages their self-help efforts toward cost-conscious management. Outline of the reforms is as follows :

a) Introduction of Yardstick formula
The yardstick foumula, which urges indirect competition between the 10 electric companies, was introduced in order to promote cost-conscious management of the companies while full-cost principle is retained. Performance indicators are measured in three cost areas : generation, transmission and operating costs. The 10 companies are grouped into three categories, namely group I, II and III, based on their comparative performance. The results of grouping is made public, and companies in group II and III, of which performance is worse, are given cost curtailing assessments. Thus this system provides incentives for power companies to improve their managerial efficiency.

b) Disclosure of annual report on cost-conscious management
In order to encourage voluntary efforts toward cost-conscious management and facilitate customers understanding, electric companies make and publish plans for efficient management every year and assess the results of implementation.

c) Introduction of optional tariffs system
As for optional tariffs, approval was mandatory for contract by agreement under the previous system. From the viewpoint of facilitating load-leveling, approval was replaced by notification to MITI. This deregulation is expected to give customers a wider variety of choices for responding to the diverse needs and thus promote load-leveling.

d) Introduction of fuel-cost adjustment system
By this system, fluctuations in the price of crude oil, LNG and coal as well as exchange rates are reflected automatically in electricity rates. Each company's electricity rates are adjusted every three months based on CIF. However, adjustment will not be made if fuel price falls within 5% range of basic adjusted unit price. A ceiling of adjustment is also set in case of sharp fuel price increases. To implement and reflect the results of these reforms, 10 electric companies applied for reduction of electricity rates to MITI in October 1995. MITI made cost curtailing assessments and approved the reduction of rates in December. Compared to the previous rates the average rate of reduction was 4.21% lower. The new rates have been applied since January 1st 1996.

(4) Rationalizing the Safety Regulations (by Establishing a Self-Responsibility Principle)

<OBJECTIVE>
The modification of the technological standard is aimed at incorporating the perspectives of functional standards and re-examining the regulation system so that the standard can readily meet new, innovative technologies.
Specifically, this entails the re-examination of articles having a lesser need for regulation, the expression of security elements only in functional terms as much as possible, and the adjustment of ASME and others to bring them into compliance with domestic and overseas standards.
The objectives of the modification of the technological standard are to help expand the choice of materials procurement offered to the private sector, boost manufacturers' technological capabilities, and reduce cost by rapidly accommodating technological advancements and establishing/strengthening Japan's standards.

(BACKGROUND)
It is essential to reassess safety regulations recent improvement in operational safety owing to technological progress and growing needs for clearer self-responsibility principle.

(NEW MEASURES)
Minimize and prioritize government's direct intervention
1 Simplifying multi-stage inspection (prior to operation)
2 Simplifying welding inspection
3 Introducing self-inspection for regular (periodical) inspection

- Introduce new safety regulation framework emphasizing self-responsibility principle by abolishing conventional framework based on government's direct intervention.
- Entrust qualification examinations of chief electricity engineer to private testing organization.

(5) Others
- Individual permit system will be abolished when electricity is supplied to a single building.
- Changes made in electrical facilities will be transferred from the individual permit to the reporting system.
- Simplify the side business regulation on the general power utilities on the condition that they are contributing to the formation of efficient demand structure by promoting the equal distribution of burden.
- To promote the efforts of general utilities aiming to start their "self-wheeling" (i.e. transmission of generated electricity by a self-generator for its own consumption) services,which were liberalized by the revision of the Law,from the spring of 1997.
- To promote the efforts of general power utilities to activate greater use of the competitive bidding system of purchases of electricity by implementing necessary measures such as more publicity of bidding information.

c. Gas

Amendment of the Gas Utility Industry Law (Implemented on March 1, 1995)

1. The need to amend the Gas Utility Industry Law

1) Until 1994, the Gas Utility Industry Law defined service areas for general gas suppliers, and suppliers supplied gas in these areas at authorized rates.
Number of general gas suppliers : 244
Number of customers : 23 million
Percentage of distribution service area : 5 percent of the total land area
(21 percent of urbanized areas)
(all figures are in 1994.)

2) Recent environmental restrictions and technological innovations have fueled demand for city gas by large-volume customers in the industrial and commercial fields (the share of all gas sales rose from 33.7 percent in 1972 to 56.6 in 1994).
Large-volume customers are generally in a position to easily switch to other fuels such as heavy oil and LPG and have the power to negotiate price with gas suppliers. As such, they seek supply and rate setting conditions that are on line with other fuel suppliers. Specifically, they demand the right to negotiate rates and receive supplies outside the service area. This will require deregulation to promote the customer's benefit and introduce the principle of competition.

3) In the meantime, the need to review safety regulations and further enhance safety has escalated amid such ongoing trends as emphasis on the principle of individual accountability, technological innovation, and expanded gas use modes.

4) Taking into account such developments, the Urban Heat Energy Subcommittee of the Advisory Committee for Energy compiled a report proposing deregulation of gas supply for industrial customers.

2. Outline of the amendment

1) Easing of business regulations concerning gas supply to industrial customers

(1) Ease the current regulations on rate-setting and approve the setting of supply conditions in principle through open negotiation among the concerned parties in the case a general gas supplier supplying city gas to an industrial customer.

(2) Allow general gas suppliers to supply industrial customers outside its service area under certain conditions. In addition, parties other than general gas suppliers should also be able to supply gas to industrial customers under certain conditions.

2) Review of safety regulations

(1) Upgrade safety regulations related to supply to industrial customers

(2) Consign examination work for chief gas engineers to the private sector

(3) Eliminate redundant application of Electric Utility Industry Law and Gas Industry Law of Japan by excluding suppliers covered under the safety regulations of the Electric Utility Industry Law from application of the safety regulations of the Gas Utility Industry Law of Japan.

3) Other matters
Formulate measures to ensure that reserve funds by general gas suppliers set aside reserves as necessary.

Measures accompanying the amendment

(1) The perpetuation of the existing supply conditions to small-volume customers through designated service areas and at the authorized rates would best serve their benefit.

(2) To prevent these deregulatory moves from impeding on the benefit of small-volume customers, industrial and

small-volume customers must be clearly demarcated and managed accordingly in the accounting process, and the overall balance of accounts in the large-volume sector must be monitored. In addition, individual cases of supply outside service areas must be investigated to ensure that these do not impede the proper execution of supply obligations inside service areas.

Note : In the immediate future, industrial customers should be defined as customers with an annual contracted supply volume of at least 2 million cubic meters (at a calorific value of 11,000kcal/cm3), in order to assure a smooth transition to the newly introduced system.

(3) Since the amendment will expand opportunities for enterprises in competing energy industries to enter into the gas business, gas transportation service utilizing the gas pipes owned by gas suppliers should be encouraged for those new gas suppliers.

(Reference 1) The Progress of the Deregulation

(as of the end of December 1996)

DEREGULATION	PROGRESS	DETAIL
1. General gas supplier's large-volume supply contracts	635	
2. Large-volume gas supply by general gas suppliers outside of the service area	2	Satte City Gas(Saitama Pref.) Tokyo Gas(Saitama Pref.)
3. Large-volume gas supply by operators other than general gas suppliers	3	Teikoku Oil Co.Ltd(Niigata Pref.) Tohoku natural Gas Co., Inc (Miyagi Pref.) Japan Petroleum Exploration Co., Ltd (Hokkaido Pref)

3-1 Energy-Related Budget

(Unit:100mil.

	FY1997	FY1996	Increase
Special Accounts 1. Special Accounts for Coal, Petroleum and the More Sophisticated Structure of Demand and Supply of Energy Policies*	11,973 7,289	11,917 7,241	56 48
(1)Coal Account* • Rationalization of Domestic Coal Mining • Coal Mine Damage Restoration, etc.	1,021	1,109	-88
(2)Petroleum and the More Sophisticated Structure of Demand and Supply of Energy Accounts*	6,268	6,132	136
(a)Petroleum Policy* • Stockpiling of Oil • Structural Improvement of the Oil Industry, etc.	5,071	5,051	20
(b)The More Sophisticated Structure of Demand and Supply of Energy Policy* • R&D of Alternative Energy Technologies • Promoting Introduction of Alternative Energy • Securing Stable of Overseas Coal, etc.	1,197	1,081	116
2. Special Accounts for Electric Power Development Promotion Policy*	4,683	4,676	8
(1)Electric Power Siting Account* • Grants for Promoting Location of Electric Power Sources • Nuclear Power Safety Measures, etc.	2,236	2,234	2
(2)Electric Power Source Diversification Account* • R&D of Nuclear Energy Technologies R&D of New Energy Technologies concerning Power Generation	2,447	2,442	5

• R&D of New Energy Technologies concerning Power Generation • Development of Hydro and Geothermal Power, etc.				

An article on China's oil and gas sector

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Newsletter

Chinas Oil and Gas: Crossroads and Strategic Choices

*By Xiaojie Xu**

China is not only the fifth largest oil producer but also one of the top twenty major natural gas producers in the world. Oil and gas outputs account for 20 percent and 2 percent, respectively, in the country's primary energy mix. From 1963 through 1989 , indigenous production increased steadily, thanks to major discoveries in East China. However, since 1990, China has encountered stagnation in its oil production while imports have steadily increased. Projections indicate that oil production on mainlan d China will reach 165-170 million tons in 2000 and peak at 200 million tons in 2010. The large gap between demand and supply will be satisfied by imports and increased use of natural gas. However, imports and further development of natural gas are cons trained by financial problems, and the current planning system and infrastructure. In addition, environmental concerns have become stronger than ever before. It has been reported that three Chinese cities (Beijing, Xi'an and Shengyang) have been listed in the world's top ten most polluted cities. Several solutions are recommended. However, each requires important strategic choices.

Strategic Concerns

There are five strategic choices that will have to be made to keep the country on the path of sustainable development.

The Growing Economy vs. Large Shortfalls in Oil and Gas

In the last decade, the country had maintained two-digit GDP growth. This dynamic economic growth has propelled a strong demand for oil and gas. The elasticity of oil consumption (ratio between GNP growth and oil consumption) has fluctuated from -0.31 t o + 1.59. In 1991-93, the elasticity jumped from 0.85 to 1.06. This soaring demand made China a net oil importer in 1993, earlier expected. The gap between oil supply and demand will rise to 70 million tons by the year 2000.

Since 1978, Chinese residential gas consumption has increased 8.7 times. China's demand for gas will more than double in the next decade. Table 1 gives the EIA's projection of oil and gas consumption over the next two decades.

Table 1
China's Projected Oil and Gas Consumption

	2000	2005	2010	2015
Crude Oil (mt)	220	270	330	420
Natural gas (bcm)	36.8	53.8	70.7	84.9

Source: EIA *International Energy Outlook*, 1996

Clearly, China's future oil and gas development entails not only increasing exploration and production (E&P) and improving energy efficiency but also involvement in the world's energy system.

Unfortunately, there is not an easy way to become involved in the world oil and gas system. Several efforts in this direction made in the Middle East have faced resistance. An effective entry strategy needs a systematic analysis of the world oil and gas system. According to the author's study of Asian oil and gas megatrends, balances and geopolitics, China's involvement in the world market is a must. Except for the Mideast and Indonesia, a large portion of natural gas will ultimately be transported from Russian Siberia, the Russian Far

East and even from Central Asia by long distance pipelines. Eventually, participation in the world's oil and gas system will be an engine to promote Chinese long-term economic growth, assuming the Chinese government can revise its oil and gas strategy and restructure the petroleum industry.

Regional Imbalance vs. Challenges in Frontier Areas

Regionally speaking, China's potential oil and gas resources and consumption are out of balance. Currently, 80 percent of the proven oil reserves, 86 percent of production and 62 percent of consumption are in East China (see Table 2). Further, in the ne xt decade, East China's oil production will decline to 50 percent. This should be balanced by oil rich areas like West China and the Chinese Offshore.

Table 2
China's Distribution of Oil Reserves, Production and Consumption
(percentage)

Area	Proven Reserves	Production	Consumption
East	80	86.5	62.4
West	12.2	8.2	12.9
Central	3.2	1.7	24.73
South	0.1	0.1	n/a
Offshore	4.0	2.7	3.2
Total	100.0	100.0	100.0

Source: CNPC Statistics 1995

There are four strategic gas areas. They are: Sichuan (Southwest China), Shenggangning (West China), the Tarim basin (Northwest China) and Yinggehai (Northern South China Sea). Huge reserves and production will come from Central China and West China in t he foreseeable future, while a majority of consumption is concentrated on its eastern and southern lands. It is reported that gas demand in costal areas of China will reach 20 bcm by the end of the century.

Table 3
Distribution of China's Gas Reserves in 1994
(percentage)

Region	Reserves	Output
Offshore	11.6	1.9
Onshore	88.4	98.1
East China	20.1	46.1
West China	5.6	6.4
Central China	52.5	45.0
South China	0.2	0.7

The immediate way to increase gas output is to enhance extraction in the Sichuan field, especially the East Sichuan area. However, to sustain its high GDP growth in the next fifteen years, priorities will also be given to acceleration of E&P activities i n West China (Shanggangning basin and the Tarim basin) and offshore (the South China Sea along with the .East China Sea). As hoped by Chinese petroleum leaders, one or two "Golden Babies" in West China are badly needed. However, there is considerable uncertainty as to whether this hope can come true. One thing that is certain is that current limited fore ign participation and financial arrangements in the Tarim basin are less then effective. This situation can be attributed to prevailing rigid policy and slow responsiveness to worldwide competition. Further implementation of this may bring a loss of fore ign capital inflow.

Also, large potential gas reserves are expected in the East China Sea and the South China

Sea (including Spratly Island). The challenge here is the fact that there are large historic territorial disputes and potential military conflicts in this area betw een China and its neighbors, including Japan, Vietnam, Philippines and Indonesia. It is essential for all parties to extract the oil and gas based on practical cooperation in these disputed areas even though it is impossible to make a final settlement of sovereignty in the short-term.

Infrastructure and Financing

Balancing the oil and gas markets in China depends largely on infrastructure and investment. Currently, there are 17,000 km of pipeline with 130 million tons of maximum transportation capacity over mainland China. These pipelines are divided among the N ortheast, North, Lower Yangzi and Sichuan areas. A national trunk pipeline is severely needed to balance oil and gas resources in the West and demand in the East and South markets. Without long distance transportation, some Tarim gas has to be burned af ter extraction.

A T-form pipeline grid has been recommended. Basically, the T-form pipeline is to serve two functions. Initially, it should connect local pipelines; thereafter it should connect with the future national trunkline. A proposed south-eastward pipeline has been approved and designed to transport gas from the Russian Krasnoyarsk, Irkutsk and Yakutsk to the China Yellow Sea. This is estimated to cost more than $4 billion. Also, future Sakhalin gas will be available to the Northeast Asian markets.

In addition, preliminary discussions regarding a pipeline running from Turkumenistan to East China, South Korea and Japan (6300 km) with an estimated investment $10 billion have occurred. The Shangjing gas pipeline (from Shangxi to Beijing, 846 km) is th e first stage of this plan.

Generally, a huge investment is required for this infrastructure construction. Traditional direct investment by the government seems no longer sufficient to meet the capital requirements. Thus strategic alliances as used elsewhere seems to be needed. I t is essential for China to develop such strategic alliances with western oil majors.

Project finance is another option for some major profitable projects. The obstacle encountered in China is the traditional mentality and their preference to own, manage and operate on their own. Some BOT projects are hard to accept in China given the con ventional mindset. Further "marketization" is required. [1]

Marketization vs. Regulatory System

China has been transitioning to The *Socialist Market Economy* since the early 1980s. However, its petroleum industry is still in the beginnings of its marketization program. The Ministry of Finance has sharply decreased its direct investment on na tural resource exploration and development (from 100 percent to 2-3 percent in 1995). But the State Planning Commission (SPC) continues to maintain planning and pricing on oil and gas. In May 1994, the central government increased oil prices to relieve producers' cash flow problems. Oil pricing in China is still under political control.

Facing the new environment, it's imperative that market oriented oil planning and pricing systems be established. The new system should encourage producers to:

- undertake their E&P activities in light of long-term developments, and
- allow prices to move to and fluctuate with world markets.

Meanwhile, reduction of the current tax burden is also required. This reduction includes: (1) decreasing the value-added tax rate and extending depreciation deductions for oil's fixed assets; (2) upgrading current oil field maintenance allowances; (3) se tting up depletion allowances applicable to marginal fields in line with international practice. In order to promote marketization of oil and gas sectors, revision of market-based oil taxation is under consideration.

However, marketization can only occur in parallel with legislation and deregulation. Currently, oil, gas and their products are highly regulated by the SPC, industrial ministries and Chinese national oil companies (NOCs). Moreover, some regulatory funct ions are confused with political and social obligations. On the other hand, due to the absence of a petroleum law and relevant rules compatible with *China's Law of Natural Mineral Resources* and an independent regulatory authority, a number of oil players are trading oil across provincial and national borders. Although their activities were curbed in 1994, the markets remain uncontrolled.

To achieve a healthy market order, the establishment of a Chinese regulatory system is recommended to oversee implementation of the *Resource Law,* industrial policy and market competition. The need here is fourfold:

- A guideline for China's future oil and gas development is required.
- Market access should allow or encourage foreign firms to participate more widely from upstream to downstream.
- Future regulation needs international reconciliation, especially in oil and gas taxation and pipeline access and transportation tariffs.
- Priority of deregulation be given to downstream and as applicable to upstream.

To encourage competition, industrial restructuring is imperative. This differs from privatization in other developing countries (for instance, YPF privatization in Argentina) and those restructurings occurring in developed countries. The focus of the ind ustrial restructuring needs to be both on establishing a specific governance structure and on reorganization of the current NOCs.

Security and Strategic Position

Future Asian oil and gas security will be affected by new geopolitical relationships among the United States, Russia and China and other sensitive areas. Current geopolitical studies focus mainly on the United States role in the Middle East, U.S.-Russia a nd the possible dominance of the Mideast by Russia resulting from a coalition with Iran or Iraqi. It is clear that China has a great opportunity to expand its economic and political will in Asia. Its involvement in the Asian oil and gas system will grea tly impact the balance of new geopolitics, which include:

1. U.S.-China relations with regard to quests for Middle East oil;

2. Russia-Chinese relations regarding coordination of oil and gas transportation and distribution;

3. China's regional role in Northeast Asia, the South China Sea and Central Asia.

China's future oil and gas market development, its international policies and its involvement in the world energy system will closely link its energy security and geopolitical position. An aggressive geostrategy for oil and gas is required. As a result, oil and gas geopolitical relationships will be revised due to Chinese input, both region-wide and worldwide.

Conclusions

To meet to the challenges discussed above, China must make realistic choices consistent with its future development goals. The central government faces a dilemma. The importance of oil and gas, full employment and high inflation risks are its overridin g concerns. Further the Chinese economic system will enter a critical phase around 1997. Multiple crises (including agriculture, population, energy and environment) will loom large by the end of the century. More important, the Chinese political regime will face new challenges resulting from a major turnover of senior personnel along with Hong Kong's return. Its freedom of strategic choice is limited. And these choices and outside responses will be critical to the world energy system and geopolitics.

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* Xiaojie Xu is a Research Fellow with the Petroleum Economic Research Center, China National Petroleum Corporation. The author thanks Dr. Michelle Michot Foss and the Energy Institute at the University of Houston - College of Business Administration for their support of the study that led to this report.

[1] This concept was developed by Dr. Michot Foss. It is the process of developing rules and institutional norms for a properly functioning energy market place.

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Outline of Turkish Petroleum Law

TPAO

TURKIYE PETROLLERI ANONIM ORTAKLIGI
(Turkish Petroleum Corp.)

Outline Of The Turkish Petroleum Law

	Exploration	Onland	4 years+first extension 2 years+ second extension 2 years
		Offshore	50 % more than onland's period
DURATION	Production	Onland	20 years+first extension 10 years+ second extension 10 years
		Offshore	20 years+first extension 10 years+ second extension 10 years
PETROLEUM LEGISLATION	Petroleum law 6326 dated in march 1954. Two decrees of 1980 guarantees the export right and international standard price for domestic sales.		
EXPLORATION DISTRICTS	Since 1978, turkey has been divided into 18 oil exploration districts. A leased area would be 25 000 hectares at most. An entitiy may not hold areas amounting to more than 150 000 hectares in any district at once.		
TAX	Petroleum rights are subjected to the general corporate tax regime. Net income tax does not exceed 55 % of the total income		
ROYALTY	12 5 %		
DRILLING OBLIGATION	Must drill a well by the end of the third year of first exploration period.		
EXPORT RIGHTS AND SALES	The petroleum right holders are entitled to export 35% of crude and natural gas produced onshore fields 45 % of crude and natural gas produced offshore fields. A petroleum holder has the right to sale in international standard price in domestic market		
RENTAL	Licensees and leasees pay rentals License rental fee is about 700 us $.		
PERSONNEL TRAINING	Holders should provide educating and training for turkish employees and have to engage them not less than 25% of the total number of personnel		

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Natural Gas Pipelines – Access Agreement for Australian States

The Department of the
Prime Minister and Cabinet

NATURAL GAS PIPELINES

ACCESS AGREEMENT

DATE: Seventh Day of November 1997

PARTIES:

THE COMMONWEALTH OF AUSTRALIA

THE STATE OF NEW SOUTH WALES

THE STATE OF VICTORIA

THE STATE OF QUEENSLAND

THE STATE OF SOUTH AUSTRALIA

THE STATE OF WESTERN AUSTRALIA

THE STATE OF TASMANIA

THE AUSTRALIAN CAPITAL TERRITORY, AND

THE NORTHERN TERRITORY OF AUSTRALIA

RECITALS:

A. The Council of Australian Governments at its meeting in Hobart on 25 February 1994 agreed to implement complementary legislation so that a uniform national framework applies to access to natural gas transmission pipelines both between and within jurisdictions.

B. The Parties, after consultation with industry and gas users, have agreed that certain principles are to apply to access negotiations and that there will be a National Third Party Access Code for Natural Gas Pipeline Systems. This Access Code is intended to comply with the requirements of the Competition Principles Agreement.

C. The Parties have agreed that the National Third Party Access Code for Natural Gas Pipeline Systems should be given legal effect by a uniform Gas Pipelines Access Law. The Gas Pipelines Access Law and the Code should be set out in schedules to legislation of the State of South Australia and be applied by each other Party by means of application legislation (except in the case of Western Australia which will enact the Gas Pipelines Access Law as a law of Western Australia).

D. The Parties have agreed that the Code and this agreement will apply to natural gas transmission and distribution pipelines.

OPERATIVE PROVISIONS:

1. PRELIMINARY

1.1 This agreement may be referred to as the Natural Gas Pipelines Access Agreement.

1.2 In this agreement, unless the contrary intention appears:

"Access Legislation" means the legislation enacted by a Party pursuant to clause 5 of this agreement and, if applicable, the Gas Pipelines Access Law as applied by that legislation, as amended from time to time (or in the case of Western Australia means the legislation as enacted in Western Australia pursuant to clause 5 of this agreement, as amended from time to time);

"Appeals Body" means a person or entity which will determine appeals brought under the Gas Pipelines Access Law as that Law is applied or enacted in a jurisdiction;

"Code" or **"Access Code"** means the National Third Party Access Code for Natural Gas Pipeline Systems, which will initially be in the form of Annex D, as that Code is amended from time to time;

"Gas Pipelines Access Law" means the Gas Pipelines Access Law giving legal effect to the Code enacted as a schedule to an Act of the Parliament of South Australia in accordance with this agreement, and the Code, each as amended from time to time in accordance with this agreement (or in the case of Western Australia means the Gas Pipelines Access Law enacted by Western Australia in accordance with this agreement, and the Code, each as amended from time to time in accordance with this agreement);

"Jurisdiction" means the Commonwealth, a State, the Australian Capital Territory and the Northern Territory of Australia;

"legislation" includes subordinate legislation;

"Ministers" means the Ministers nominated by each Party under clause 3;

"Parliament" includes the Legislative Assembly of a Territory; and

"Relevant Regulator" means an independent person or entity which will act as the regulator under the Access Legislation (including the Access Code) with respect to a particular natural gas pipeline.

2. ACCESS OBJECTIVES

2.1 The objective of this agreement is to establish a uniform national framework for third Party access to natural gas pipelines that:

(a) facilitates the development and operation of a national market for natural gas;

(b) prevents abuse of monopoly power;

(c) promotes a competitive market for natural gas in which customers may choose suppliers, including producers, retailers and traders;

(d) provides rights of access to natural gas pipelines on conditions that are fair and reasonable for both Service Providers and Users; and

(e) provides for resolution of disputes.

3. MINISTERS

Each Party will keep each other Party informed, by written notice, of the Minister responsible for implementing that Party's obligations under this agreement and who will perform the functions conferred on him or her under the Gas Pipelines Access Law (including the Code).

4. OPERATION OF AGREEMENT

4.1 This agreement is effective when executed by all Parties.

4.2 This agreement may be amended by agreement executed by all Parties.

4.3 In relation to the State of Tasmania, the Parties acknowledge the State of Tasmania's commitment to participate as a Party to this agreement and comply with all obligations under this agreement from a time sufficiently before the first natural gas pipeline in that State is approved or any competitive tendering process for a new natural gas pipeline in that State is commenced.

5. ENACTMENT OF LEGISLATION

5.1 The State of South Australia will submit to its Parliament, in that Parliament's 1997 Spring sitting, legislation in the form set out in Annex A (with the Gas Pipelines Access Law in the form set out in Annex B as Schedule 1 and the Code in the form set out in Annex D as Schedule 2), subject in each case to possible minor drafting amendments, and will take all reasonable measures to ensure that legislation is enacted in the form submitted and is enacted and assented to by 31 December 1997 (provided the Commonwealth legislation referred to in clause 5.2 has commenced to the extent necessary to enable the South Australian legislation to have legal effect).

5.2 The Commonwealth of Australia will submit to its Parliament, in that Parliament's 1997 Spring sitting, legislation in the form set out in Annex C, subject to possible minor drafting amendments, and will take all reasonable measures to ensure its legislation is enacted and proclaimed expeditiously and in the form submitted.

5.3 Subject to clause 5.4, each other Party (except Western Australia) will submit to its Parliament as soon as practicable (but in any event no later than six months) after the enactment of the South Australian legislation, application legislation applying the Gas Pipelines Access Law, as that Law is enacted as schedules to the South Australian Act and as amended from time to time, as a law of the Party (including in State or Territory offshore waters). Subject to clause 5.4, Western Australia will submit to its Parliament as soon as practicable (but in any event no later than six months) after the enactment of the South Australian legislation, legislation having an essentially identical effect to the Gas Pipelines Access Law as enacted as schedules to the South Australian Act, except as permitted by this agreement or as otherwise agreed between the Parties. The legislation of each such Party shall:

(a) be consistent with this agreement; and

(b) have been agreed in writing by all the Ministers prior to submission to its Parliament.

Each such Party will take all reasonable measures to ensure its legislation is enacted in the form submitted and is proclaimed and commenced by 30 June 1998.

5.4 Each Party's obligations under clause 5.3 are subject to:

(a) the South Australian Parliament enacting legislation as required by clause 5.1;

(b) the Commonwealth of Australia Parliament enacting legislation as required by clause 5.2; and

(c) in the case of Tasmania, clause 4.3.

5.5 South Australia will as soon as practicable after the passage of the legislation referred to in clause 5.1 take all reasonable measures to make any regulations under that legislation which have been approved in writing by all the Ministers. After Western Australia has enacted the legislation referred to in clause 5.3 it will take all reasonable measures to make any regulations under that legislation which have been approved in writing by all the Ministers. Western Australia will take all reasonable measures to ensure that at all times regulations made under the Western Australian legislation have an essentially identical effect to those made under the South Australian legislation.

6. AMENDING LEGISLATION

6.1 A Party must not amend its Access Legislation (either directly or by making other legislation that would alter its effect, scope or operation) unless the amendment has been approved in writing by all the Ministers.

6.2 South Australia will submit to its Parliament a bill amending the Gas Pipelines Access Law that is enacted as Schedule 1 to an Act of the Parliament of South Australia if that bill has been approved in writing by all the Ministers and will take all appropriate steps to secure the passage of that bill and bring it into force in accordance with a timetable agreed by all Ministers.

6.3 Western Australia will submit to its Parliament a bill amending the Gas Pipelines Access Law as enacted in Western Australia if that bill has been approved in writing by all the Ministers and will take all appropriate steps to secure the passage of that bill and bring it into force in accordance with a timetable agreed by all Ministers. Western Australia will take all reasonable measures to ensure that at all times the Gas Pipelines Access Law as enacted in Western Australia has (except to the extent permitted by this agreement) essentially identical effect to the Gas Pipelines Access Law as enacted as a schedule to an Act of the South Australian Parliament.

7. CONFLICTING LEGISLATION

7.1 Each Party will, no later than the time its Access Legislation commences, take all reasonable measures to repeal, amend or modify any other legislation which is inconsistent with, or would alter the effect, scope or operation of, the Access Legislation (including the Access Code) or this agreement (other than legislation in relation to transitional arrangements and derogations permitted under clause 12 or franchising and licensing arrangements permitted under clauses 13 and 14).

7.2 Except as agreed in writing by all the Ministers, a Party will not submit a bill to its Parliament or take other action to bring into force any legislation (by way of amendment of existing legislation or otherwise) which would be inconsistent with, or alter the effect, scope or operation of, the Access Legislation (including the Access Code) or this agreement (other than a bill or legislation in relation to franchising and licensing arrangements permitted under clauses 13 and 14).

7.3 For the purposes of this agreement, legislation regulating retail gas prices shall not of itself be prohibited under clause 7.1 or 7.2.

8. ACCESS CODE

8.1 The Parties agree that the initial Access Code will be a schedule to the South Australian legislation referred to in clause 5.1 and will be in the form set out in Annex D to this agreement.

8.2 The Parties agree that the Access Code will be capable of amendment by agreement between the Ministers in accordance with the procedures set out in the Gas Pipelines Access Law (including the Access Code).

9. ADMINISTRATION OF THE CODE

9.1 Administration of the Code will be the responsibility of a National Gas Pipelines Advisory Committee (***NGPAC***), to be established by the Parties under this agreement.

9.2 The NGPAC will be composed as follows:

(a) an independent Chair to be appointed collectively by the Parties;

(b) the Code Registrar;

(c) one person nominated by each Party;

(d) one person nominated by each of the following industry groups:

- Australian Gas Association (AGA),

- Australian Petroleum Production and Exploration Association (APPEA),

- Australian Pipeline Industry Association (APIA), and

- Business Council of Australia Energy Working Group (BCA);

(e) two representatives of State and Territory Relevant Regulators appointed by the Parties on a rotation basis, with Victoria and New South Wales to provide the first two such representatives; and

(f) one representative nominated by the Australian Competition and Consumer Commission.

The National Competition Council will be invited to participate as an observer and adviser.

9.3 Only persons nominated by a Party under clause 9.2(c) will be entitled to vote at NGPAC meetings.

9.4 The functions of the NGPAC will be to:

(a) monitor, review and report on the operation of the Gas Pipelines Access Law (including the Code);

(b) provide advice to the Ministers on interpretation and administration of the Gas Pipelines Access Law (including the Code);

(c) prepare information on the Gas Pipelines Access Law (including the Code) for general publication; and

(d) make recommendations on amendments to the Gas Pipelines Access Law (including the Code) to Ministers.

The Parties may agree to give the NGPAC other functions. NGPAC may determine its own procedures subject to the requirements as set out in the Gas Pipelines Access Law (including the Code).

9.5 The Commonwealth will pay one third of the costs of funding the NGPAC (including its Chair) and the Code Registrar (including any damages or legal costs arising out of the Code Registrar performing its functions under the Code). The balance of those costs will be shared by the Parties (other than the Commonwealth) on the basis of population.

9.6 The Parties may from time to time unanimously agree on other appropriate mechanisms for administration of the Code.

10. EFFECTIVE ACCESS REGIME

10.1 Each State and Territory Party other than Tasmania agrees to submit the access regime embodied in its Access Legislation (including the Code) to the National Competition Council for certification as an effective access regime under Part IIIA of the Trade Practices Act not later than thirty (30) days after enactment of its Access Legislation. Tasmania agrees to submit the access regime embodied in its Access Legislation (including the Code) to the National Competition Council for certification as an effective access regime under Part IIIA of the Trade Practices Act as soon after enactment of its Access Legislation as is possible.

10.2 If the access regime embodied in a Party's Access Legislation (including the Code) has been certified as an effective access regime under Part IIIA of the Trade Practices Act, each Party will take all such actions as may be necessary to ensure that that access regime remains an effective access regime.

10.3 The Parties will as far as possible co-ordinate referrals and submissions to the National Competition Council and do so collectively or concurrently where possible.

11. JURISDICTION OF RELEVANT REGULATOR AND OTHER CODE BODIES

11.1 The Parties agree that in relation to those pipelines classified or determined to be transmission pipelines pursuant to the Gas Pipelines Access Law the Relevant

Regulator shall be the Australian Competition and Consumer Commission (except that the Relevant Regulator for all transmission pipelines that are located wholly in Western Australia will be a State-based independent Relevant Regulator, subject to independent review of this position in the event that a significant inter-state pipeline is to be constructed to or from another jurisdiction to the east of Western Australia or five years from the date Western Australia signs this agreement, whichever is the earlier).

11.2 The Parties agree that in relation to those pipelines classified or determined to be distribution pipelines pursuant to the Gas Pipelines Access Law:

(a) that are located wholly in a particular State or Territory, the Relevant Regulator shall be the body specified in Annex G in relation to that State or Territory (or such other body as the Parties may agree); and

(b) that are located in more than one State or Territory, the Relevant Regulator shall be the body specified in Annex G in relation to the State or Territory with which the Pipeline concerned is most closely connected as determined pursuant to the Gas Pipelines Access Law (or such other body as the Parties may agree).

Any such Relevant Regulator must at all times be an independent authority established by statute and recognised by the National Competition Council as independent.

11.3 Each Party which has established a body which will act as a Relevant Regulator under the Code agrees to take such actions as are available to it to ensure that the body concerned develops guidelines for the conduct of arbitrations under the Code in relation to pipelines for which it will be the Relevant Regulator, which (amongst other things) contain practices and procedures to establish sufficient independence between arbitration decision making and regulatory decision making under the Code. Such practices and procedures should include provisions to the effect that, if a party to a dispute so requires, the Relevant Regulator will appoint as an arbitrator a person (who may be a Commissioner, member or other officer of the Relevant Regulator) who has not been substantially involved in regulatory decision making in relation to the pipeline to which the arbitration relates.

11.4 The Parties agree that the Appeals Body:

(a) in relation to decisions made by the Australian Competition and Consumer Commission or the Commonwealth Minister for which administrative appeals are provided in the Gas Pipelines Access Law shall be the Australian Competition Tribunal;

(b) in relation to decisions made by jurisdictional Relevant Regulators or State or Territory Ministers for which administrative appeals are provided in the Gas Pipelines Access Law shall be the body specified in Annex G in relation to the State or Territory under whose Access Legislation the Relevant Regulator or Minister concerned was acting (or such other bodies as the Parties may agree).

11.5 The Parties agree that for the purposes of the sections of the Access Code dealing with Coverage:

(a) the National Competition Council shall have the functions conferred on it under the Access Code; and

(b) in the case of pipelines listed in the Code as transmission pipelines, or classified or determined to be transmission pipelines pursuant to the Gas Pipelines Access Law, the Relevant Minister for the purposes of the Gas Pipelines Access Law (including the Access Code) shall be the Commonwealth Minister or, if a Minister other than the Commonwealth Minister is specified in Annex G, that Minister (or such other Minister as the Parties may agree);

(c) in the case of pipelines listed in the Code as distribution pipelines or classified or determined to be distribution pipelines pursuant to the Gas Pipelines Access Law:

(i) if the Pipeline is located wholly in a particular State or Territory, the Relevant Minister for the purposes of the Gas Pipelines Access Law (including the Access Code) shall be the Minister of that State or Territory (or, if that State or Territory so elects, the Commonwealth Minister); and

(ii) if the Pipeline is located in more than one State or Territory, the Relevant Minister for the purposes of the Gas Pipelines Access Law (including the Access Code) shall be the Minister of the State or Territory with which the Pipeline concerned has the closest connection as determined pursuant to the Gas Pipelines Access Law (or, if that State or Territory so elects, the Commonwealth Minister).

11.6 The Commonwealth and each other Party agree for the purpose of section 44ZZM of the Trade Practices Act that each Party may confer on the Australian Competition and Consumer Commission the functions and powers contemplated by this agreement and the proposed Access Legislation of that Party (including the Code) and that these functions and powers shall be performed or exercised in accordance with the proposed Access Legislation of that Party (including the Code).

11.7 The Parties agree for the purposes of clause 10 of the Competition Principles Agreement that the functions of the National Competition Council contemplated by this agreement (including consideration of any proposed amendments to the access regime embodied in the Access Legislation (including the Code)) form part of the work program of the National Competition Council.

11.8 The Commonwealth and each other Party agree for the purposes of proposed section 44ZZOA of the Trade Practices Act (to be introduced by the legislation to be enacted by the Commonwealth pursuant to clause 5.5) that each Party may confer on the Australian Competition Tribunal the functions and powers contemplated by this agreement and the proposed Access Legislation of the Party concerned and that these functions and powers shall be performed or exercised in accordance with the proposed Access Legislation of that Party (including the Code). The Commonwealth agrees to ensure that the Australian Competition Tribunal is sufficiently resourced to perform functions conferred on it by the Gas Pipelines Access Law.

12. PROPOSED TRANSITIONAL ARRANGEMENTS AND DEROGATIONS

12.1 The Parties agree that transitional arrangements and derogations from the Gas Pipelines Access Law (including the Access Code) will be allowed only if they:

(a) have been approved by all the Ministers; and

(b) are specifically identified in their respective Access Legislation or other legislation that is appropriate.

Each Party's timetable for the phase in of access which is intended to be applied as at the date of this agreement is set out in Annex H. The other transitional arrangements and derogations intended to be applied by each Party as at the date of this agreement are set out in Annex I.

The Parties note that the specification of transitional arrangements and derogations in Annex H, Annex I and the Access Legislation of a particular jurisdiction, or the decision of Ministers under clauses 5.3 or 12.1, does not limit the discretion of the Commonwealth Minister to certify or not certify the access regime embodied in a jurisdiction's Access Legislation (including the Code) as an effective access regime under section 44N of the Trade Practices Act or the National Competition Council's discretion under section 44M of the Trade Practices Act.

12.2 Each Party will ensure that any transitional arrangements or derogations will:

(a) be limited, in duration and extent, to transitional arrangements or derogations essential to the orderly introduction of the competitive arrangements contemplated by the Gas Pipelines Access Law (including the Code); and

(b) except where otherwise noted in Annex H or Annex I or approved by all the Ministers under clause 12.1(a), be phased out, repealed or terminated no later than 1 September 2001, so that a competitive natural gas market characterised by access to all gas consumers and all producers in all States and Territories exists after this date.

12.3 It is the intention of the Parties that the implementation of the Access Code will not result in additional transitional expenditures for Pipeline owners such as additional taxes. In particular each Party will exempt from stamp duty and other taxes the transfer of assets by a Service Provider (as defined in the Access Code) made to comply with the ring fencing obligations in the Access Code.

13. FRANCHISING PRINCIPLES

13.1 Each Party agrees to conform to the Franchising Principles contained in Annex E and put in place arrangements at the time its Access Legislation is enacted to remove, phase out or reform existing exclusive franchise arrangements by 1 September 2001 (except in the case of Kalgoorlie-Boulder in Western Australia in relation to which a ten year non-renewable franchise for the distribution system and a ten year non- renewable franchise for the trading of gas on the system, have been awarded under a competitive tender process and which need not be removed, phased out or reformed until the end of the ten year term).

14. LICENSING PRINCIPLES

14.1 Each Party agrees to conform to the Licensing Principles contained in Annex F and put in place arrangements at the time its Access Legislation is enacted to remove, phase out or reform existing licensing arrangements incompatible with the Licensing Principles or the Gas Pipelines Access Law (including the Access Code) by 1 September 2001 (or 1 July 2002 in the case of Western Australia).

15. WITHDRAWAL OF PARTIES

15.1 The Parties agree that if:

(a) a Party fails to comply with any of its obligations under this agreement; or

(b) Access Legislation has not been enacted and become effective in a Party's jurisdiction on or before the date applicable to that Party under clause 5,

it may be required to withdraw from this agreement if all of the other Parties give written notice requiring it to withdraw.

15.2 A Party may withdraw from this agreement by giving notice in writing to the other Parties of its intention to do so, and all Parties shall then negotiate in good faith in relation to the terms of withdrawal of the Party which has given notice, including the date upon which the Party will cease to be a Party and any changes to legislation and other arrangements with respect to the Gas Pipelines Access Law (including the Access Code) that may be necessary as a consequence of the withdrawal.

15.3 If a Party withdraws, this agreement will nevertheless continue as an agreement between all other Parties.

The New Age of Natural Gas – How the regulators brought competition in USA

Regulation
The Cato Review of Business & Government

The New Age of Natural Gas

How the Regulators Brought Competition

Robert J. Michaels

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Although there were several credible candidates for the title, fifteen years ago natural gas was probably America's most misregulated industry. Interstate pipelines and local distributors were natural monopolies governed by the most stereotypical commission procedures. Price controls on gas production had created shortages that exacerbated the energy crises of the 1970s. Today, the controls are gone, and gas prices are about half those of a decade ago. The pipelines have been restructured into competitive entities by--of all people--federal regulators. State-regulated distributors are next in line for the same shock treatment. Instead of husbanding a resource at the end of its availability, federal policy now aims at expanding production and sales in competitive markets.

Remarkably, few people outside the industry have looked at the transformation. Beyond its historical interest, the way the change took place bears examining. The regulators and the courts delivered competition to the gas industry. Some of their actions were impelled by the crises that regulation itself caused. Others were strikingly intelligent applications of theoretical economics. Still others were arguable overreaches of authority, but for once those favoring competition got an overreach in their direction. Had other choices been made, the 1970s might still be with us.

Where We Were

Through the 1970s pipelines and distributors had always been regulated, and for the best of reasons. The high-pressure interstate pipelines that linked producing and consuming areas were either natural monopolies or at best oligopolies with high barriers to entry. For the volumes in question, more than a handful of pipelines would have been economically unthinkable. The distribution companies that moved gas to its final consumers were also natural monopolies. No economist ever proposed to increase competition by digging up a city to duplicate an existing distributor's small-diameter pipes.

Since the 1930s the Federal Power Commission (FPC), and its post-1977 successor, the Federal Energy Regulatory Commission (FERC), had regulated interstate pipelines. They attempted to set rates that recovered a pipeline's prudently incurred costs and provided its investors a fair return. Like other regulators, the commissioners had to estimate costs, somehow allocate them among customers, detect imprudent expenses, and determine a fair return from the testimonies of opposing experts. One characteristic of the industry would prove to be important: instead of transporting gas owned by producers or users, pipelines purchased it at the wellhead and, passing on the purchase price, resold it to distributors.

Distributors hold state-regulated franchise monopolies on gas sales to final users. They are corporations, or occasionally municipal operations, subject to state regulatory oversight. Regulators (local government in the case of municipals) determined their allowable costs, rates to different customer classes, and profitability. In the past those costs included gas purchases from the pipeline and the pipeline's transport costs. Both federal and state regulators faced the generic problems of controlling natural monopolies, and neither seemed interested in increasing competition or enhancing efficiency. As long as markets were predictable, prices reasonable, and shortages minimal, the ossification they presided over would be bearable.

Gas was also regulated for the worst of reasons. In 1954 the Supreme Court issued the *Phillips Petroleum Company v. Wisconsin* decision, which declared that the Natural Gas Act of 1938

required regulation of both pipeline rates and the prices charged by gas producers, known as wellhead prices. As economics, there was no reason to regulate a competitive market containing thousands of producers. As regulation, wellhead price control was theatric. Instead of dealing with a few dozen familiar pipelines, the FPC had to examine the costs of tens of thousands of gas wells, including those of finding new supplies. By 1960 the FPC had decided ten producer rate cases and had 2,900 pending. It finally cut the backlog by regulating rates on the basis of average costs in an area, first regionally and later nationally.

As policy, wellhead price control was disastrous. Basing its decisions on historic data, the FPC seriously underestimated the costs of replacing exhausted wells. In every year between 1966 and 1978 proved gas reserves in the lower forty-eight states fell. As production fell and shortages worsened, pipelines often had to curtail supplies to distributors, who in turn curtailed their captive customers. Seeing the shortages, the FPC issued several general price increase orders, but they seemed irrelevant in the near term. The oil shocks of the 1970s further aggravated the shortages, as oil users attempted to turn to price-controlled gas. There were no shortages of gas sold in the state where it was produced. These intrastate markets were not subject to FPC wellhead regulation.

In 1977 newly elected President Jimmy Carter looked at the reserve statistics. Definitely not an economist, he concluded that the planet was running out of gas. Instead of quick price decontrol, he proposed a war on consumption, with producer incentives added almost as an afterthought. Beyond other consumption-limiting policies, the Powerplant and Industrial Fuel Use Act of 1978 regulated gas-burning facilities--beginning with a ban on new gas-fired power plants. By 1990 that act would prohibit any use of gas to generate electricity. On the supply side, the Natural Gas Policy Act of 1978 would alleviate interstate shortages by putting intrastate gas under the interstate price controls. That act would deregulate some newly discovered and preexisting gas, but only over the next ten years. Some prices could never rise above shortage levels, and about half of all gas would never be deregulated. The newly created FERC would take over most of the regulation. Everything could only get worse.

Where We Are

Things did not get worse. Instead, the unimaginable happened. Fifteen years later, the shortages are gone. All gas prices are determined in unregulated, competitive markets. The average wellhead price peaked in 1984, at $2.66 per thousand cubic feet. By 1990 that price, unadjusted for inflation, had fallen to $1.71 and for a brief period in early 1992 was under $1.20. The Natural Gas Wellhead Decontrol Act of 1989 removed the last of the controls, which had in any case become redundant. By 1987 every major provision of the Fuel Use Act had been repealed. Administratively granted exceptions had effectively nullified that act some time earlier.

For both economic and environmental reasons, gas will be the fuel of the future. Instead of being banned, many new electricity generators are small gas-fired plants not owned by utilities. All stages of the gas industry are actively trying to find new customers, and the Department of Energy is funding the development of new gas-burning technologies. The interim chairman of FERC, Democrat Elizabeth Moler, criticized a policy adopted during her prior tenure as a commissioner. She asserted that FERC ``should be encouraging pipelines to seek new markets for natural gas, not discouraging them." At least one competent expert guessed that within the next five years American gas exports to Mexico would exceed imports from Canada.

Economists had good reason to expect that wellhead decontrol would end the shortages, but the rest of the industry seemed hopeless. Since the pipelines and distributors were obvious natural monopolies, economists relegated them to the backwaters of incompetent regulation and redistributionist politics. But by the late 1980s the regulators had brought competition to them. The interstate pipelines are no longer resellers of gas who can force distributors to accept and pass on the cost. Almost overnight, nearly 90 percent of their business became the transportation of gas owned by others. Their former captives now make their own deals with producers and use the pipeline only for delivery. Smaller producers and inexperienced customers have at their disposal a growing industry of gas marketers and brokers, who can familiarize them with the market and individualize their transactions. Over two-thirds of all gas sales are now effectively in ``spot" markets, with terms of thirty days or less. Pipeline interconnections have grown in capacity and complexity to open up a national market. Futures contracts and options are traded on the New York Mercantile Exchange.

The changes have reached the state-regulated distributors. In the era of shortages many of their industrial customers installed fuel-switching capabilities. Industry's new sensitivity to prices meant that state regulators would find it increasingly difficult to force industrial users to subsidize residential customers. Federal policy adds to the state regulators' problem. FERC now allows industrial users to bypass their local distributors, purchase gas from producers, and have interstate

pipelines deliver it. In a growing number of states regulators have responded by allowing distributors to turn themselves into transporters of their customers' own purchases. In some states small end-users can free themselves from dependence on their distributor by hiring brokers to make group purchases that would be uneconomic if made individually.

The Bubble Arrives

The industry would be transformed not by shortage, but by surplus. Shortly after passage of the Natural Gas Policy Act in 1978, the Department of Energy was chagrined to announce that there was in fact a surplus of deliverable gas. Although we cannot pinpoint the sources of the surplus, they certainly included the decline in industrial demand and the delayed success of earlier FPC orders to increase wellhead prices. Thus began the gas ``bubble," an excess of uncommitted gas beyond the buffer stocks usually seen in well-functioning markets.

It had been so long since the gas market was near equilibrium that everyone assumed that the bubble was an anomaly. The pipelines reasonably expected that shortages would soon replace the surplus. Knowing that they had an indefinite resale obligation to distributors, the pipelines bought large amounts of deregulated gas at prices that were sometimes more than triple those of controlled gas. Many contracts had take-or-pay clauses that obligated pipelines to pay for fixed monthly amounts of gas, whether they took the gas in that month or not. (Generally, they allowed postponement of the take as long as the payment was made, and hence much of the take-or-pay problem discussed below was actually a matter of financing rather than of wasted payments.) Oddly, few of the contracts contained so-called market-out provisions that would have mitigated take-or-pay if the market price of gas fell.

Take-or-pay seemed to pose few risks, since everyone knew that the shortages would soon return. The price of the new gas may have been high, but regulators would see that the pipelines had made prudent investments in assured supplies. Lock-step price pass-throughs would further protect the pipelines. FERC regulated the pipeline's price of gas to distributors at the weighted average of gas costs. Most distributors had no supply other than pipeline resales, and state regulators also allowed full pass-through of purchased gas prices. If demand were insensitive to price, revenue from final customers would still cover everyone's gas costs.

But by 1981 industrial customers consumed 25 percent less gas than they did in 1972. They had abandoned gas for other fuels or invested in fuel-switching capability to cope with curtailments. The provisions of the Fuel Use Act encouraged further declines in their consumption. Downstream prices also rose because the fixed costs of pipelines and distributors had to be spread over fewer cubic feet of delivered gas. State regulators responded by saddling industrial customers with rates that subsidized residential users.

Around 1982 world oil prices collapsed. Gas prices, however, continued to rise as the fraction of deliveries under take-or-pay grew. Although volume was declining, pipeline revenue was partially protected by ``minimum bill" provisions, which required certain payments by resale customers regardless of the amount of gas delivered. Minimum bills covered both a pipeline's fixed costs and some of its variable costs. To further protect pipeline revenue, in 1983 FERC approved the introduction of so-called special marketing programs. They allowed some price-sensitive users to buy inexpensive gas directly from producers in the developing short-term or ``spot" market. The pipeline then delivered the gas to the buyer, contingent on the producer's releasing the pipeline from an equal amount of take-or-pay liability.

The Coming of Open Access

In 1984 FERC issued Order 380, its first major competition initiative. Order 380 eliminated the variable cost components of pipeline minimum bills. FERC reasoned that minimum bills were anticompetitive because they needlessly raised the cost of switching suppliers. The apparent inequity of special marketing programs was taken to the U.S. Court of Appeals for the District of Columbia, in two lawsuits brought against FERC by the Maryland People's Counsel. Plaintiffs argued that the programs lowered gas prices to the most price-sensitive users, while forcing those without alternatives to bear the burden of take-or-pay. Captive customers only benefitted to the extent that the pipeline's fixed costs were spread over a larger throughput. In 1985 the court put an end to the programs. Both liberal Judge Ruth Bader Ginsburg and then-Judge Antonin Scalia held them unnecessarily discriminatory under the Natural Gas Act. If FERC wanted to institute transport, only nondiscriminatory programs would do.

Uncertain of its legal powers over transport, FERC issued Order 436 on October 9, 1985. Order 436 offered a seeming option. A pipeline could choose ``open access" status--offering to transport gas purchased by any of its customers. Customers not choosing transportation could continue to

use resale service. A pipeline that did not opt for open access would not be allowed to transport any third-party gas and could only provide resale service. FERC sweetened the deal by offering open-access pipelines an "optional expedited certificate" for new facilities. Ordinarily, obtaining a permit to build new facilities required a costly and often contested FERC proceeding that might take years. With optional expedited certification, FERC would presume that a project was in the public interest if the pipeline would bear the risk. A pipeline that wished to compete needed open access, since otherwise all of its projects risked delays in certification. Order 436 changed the industry. Within months every important interstate pipeline had applied for open access status. Within two years, 75 percent of all interstate throughput was transported rather than resold.

Order 436 largely passed legal muster in June of 1987, when a panel of the D.C. Court of Appeals decided *Associated Gas Distributors v. FERC*. Judge Stephen Williams, a law and economics scholar, ruled that FERC had the power to institute transport programs, to offer expedited certification, and to bundle both in a hard-to-refuse package. The court understood FERC's logic: if several pipelines served a consuming area and one of them chose open access, those that did not follow would face a growing competitive disadvantage. But open access applied to all of a pipeline's customers, including those in areas where it had no competition.

The court found problems with FERC's neglect of take-or-pay issues and remanded Order 436 for further rulemaking. The court wanted FERC to address the possible conditioning of a producer's access to a pipeline on the resolution of outstanding take-or-pay contracts. Judge Williams sympathized with FERC's reluctance to alter contracts. He noted that intervention would "raise extremely serious problems regarding the ability of private parties in the gas production industry to rely on private contracts." Nevertheless, he remanded on grounds that the contracts had been written in the all-resale era. Since the contracts were a response to regulation that required resale pipelines to find adequate gas supplies in a shortage period, the commission should have the power to modify them if the regulatory order changed. The court also remanded the order's provisions on customer rights to convert resale service to transport service for a more reasoned rulemaking. Although the court noted that private contracts were again being abrogated there, it reasoned that the resale contracts originated in the era when they were the only terms available from pipelines with monopoly power.

The court gave little guidance on how to deal with take-or-pay. Out of many options, including a reasoned choice of inaction, FERC issued Order 500 on August 7, 1987. That order required that a producer credit any gas transported for it against the transporting pipeline's take-or-pay liability. To minimize the intrusion, Order 500 mandated cross crediting only on a subset of all contracts that had been written during 1986 and 1987. To force rapid settlements, the order imposed a sunset deadline of December 31, 1988, for recovery that was later extended by three months. To avoid future take-or-pay problems FERC adopted the ratemaking principle of a gas inventory charge, which would compensate the pipeline for standing ready to provide its resale customers' requirements.

Efficiency won again, this time in the D.C. Court of Appeals' 1989 decision in *American Gas Association et al. v. FERC*. Judge Douglas Ginsburg, another law and economics scholar, wrote the opinion. He first noted that as of late 1987 almost 80 percent of take-or-pay liabilities had been voluntarily renegotiated. Hence, approving Order 500 would affect at most one or two billion dollars in liability, depending on whose figures one used. Even though much of the burden had been lifted, he ruled that the law allowed FERC to order the new contractual terms. Although he remanded the sunset provision, Judge Ginsburg made it clear that he understood FERC's desire to get the negotiations over with before ever issuing a final rule. But by the time of his decision, the game was over: to go back to square one FERC would have had to invalidate the renegotiated contracts. By administrative fiat, as approved by the court, FERC had brought about a change that would have been impossible to legislate.

The Final Wellhead Decontrol

At the same time FERC was exploring the boundaries of the law's mandate that it set prices at "just and reasonable" levels. FERC felt that the Natural Gas Policy Act's vintaged controls on old gas violated that standard because they held prices below replacement cost. In 1986 FERC issued Order 451, which collapsed the act's fifteen vintages into one and set a ceiling price that was above the market-clearing price. That FERC had the will to upset a complex legislative bargain and make the ceilings redundant was remarkable. Producers rejoiced, and pipelines that bought controlled gas for resale protested. Like the open access orders, Order 451 would force the abrogation of some contracts on grounds that they had been written under regulatory duress. Anticipating that shortage prices would rule indefinitely, many long-term contracts for controlled gas specified that the pipeline pay the legal ceiling price. With ceilings now above market prices, FERC effectively specified new contractual terms: the pipeline could decline to pay the new ceiling price, conditional on its agreeing

to transport the gas to any other buyer whom the producer might find.

Over one stinging dissent, in September 1989 a three-judge panel of the Fifth Circuit Court of Appeals overturned Order 451 in *Mobil Oil Exploration and Producing Southeast et al. v. FERC*. The court found the order beyond FERC's authority and stated that the commission was attempting to do what only Congress could do. In January 1991 a unanimous Supreme Court reversed that decision. The Court endorsed FERC's use of the ``just and reasonable" standard and ruled that FERC could compel renegotiations. In an odd twist the Court said that FERC was not deregulating ``in any legally relevant sense" since it was still declaring a ceiling price, albeit one that the market had overruled. The Court also minimized the importance of the wealth loss the order caused the pipelines. Order 451 had important consequences for competition. With all gas uncontrolled, wasteful rent-seeking efforts to obtain or defend access to price-controlled gas would vanish. Whatever the courts said, Congress concurrently validated FERC's action. It passed the Natural Gas Wellhead Decontrol Act of 1989, which would remove even the redundant ceilings by January 1, 1993. Congress too had little choice, since legislating a new set of controls would probably have been impossible in the changed industry.

The Final Restructuring Rule

Although transported gas dominated their throughput, pipelines entered the 1990s with residual responsibilities to those customers who still elected resale service. They also remained responsible for reliable operation and for coordinating receipts, deliveries, and storage, both for themselves and for third-party transporters. Most pipelines also owned marketing affiliates that sold gas in competition with producers and brokers. Transporters were concerned that a pipeline could use its operational knowledge and its information about their transactions to advantage itself as a gas merchant, particularly during peak periods. Conversely, pipeline resales were disadvantaged by cumbersome abandonment regulations that did not apply to transport service.

Other problems, by no means minor, remained. Inefficient rate designs from the old regime continued in effect. The rates charged more than cost for usage-related services and less than cost for the reservation of capacity. The misloading of the charges encouraged excessive use at peaks, unnecessarily favored interruptible over reliable (``firm") service, and produced delivered prices that sometimes created inefficiency because buyers would not purchase from the lowest-price producer. Some transactions were foreclosed because pipelines did not offer customers access to storage facilities on the same grounds as they allowed themselves. Others were foreclosed because pipelines with capacity rights on upstream pipelines did not allow upstream users access equal to their own. Users also did not have the same flexibility as the pipeline in altering their receipt and delivery points. Finally, transport customers who wished to buy or sell their rights to use the pipeline operated in a market where information was costly to obtain.

On April 8, 1992, FERC addressed all of those issues in its 250-page Order 636, known as the final restructuring rule. Order 636 levels the playing field by forcing the ``unbundling" of pipeline services and symmetric treatment of the pipeline and its customers. Transport customers will have specific rights to the pipeline's main line capacity, storage, and rights on upstream pipelines. With those rights a transport customer can duplicate virtually any service the pipeline can offer a resale customer. To make treatment more symmetric Order 636 requires that pipeline resales be made as far upstream as possible, after which the pipeline must treat resold and transported gas equally. On their side pipelines will have the right to resell gas at ``market-based" rates--they are free to sell at competitive prices, subject to existing regulation of affiliate relationships. The order also loosens requirements that a pipeline continue providing uneconomic services. Pipelines are now allowed ``pregranted abandonment" of many shorter-term obligations when the underlying contracts expire.

Order 636 restructures transportation rates to conform to the ``straight fixed-variable" method, which efficiently puts all fixed costs in the capacity charge and all variable costs in the transport charge. The prior misloading subsidized uses with low load factors, such as residential heating. The new rates will make such users responsible for the cost of the capacity they actually use in peak periods. Distributors with poor load factors are understandably upset, but Order 636 also requires that pipelines mitigate the damage if the new rates impose over a 10 percent shift in revenue from a customer class. Competition may have compelled the change. Canadian pipelines, with straight fixed-variable rates, had been able to underprice American pipelines on deliveries to the Northeast.

Finally, Order 636 institutes ``capacity release" programs to reallocate transport space. Each pipeline administers its own program, with an electronic bulletin board on which shippers can post bids for available segments. The original holder of the capacity remains responsible for paying the pipeline its regulated rates. The details of coordinating capacity between pipelines and ensuring flexibility of receipt and delivery points have yet to be worked out. In early 1993 a nonprofit corporation, the National Registry of Capacity Rights, was founded. It will function as a title registry,

maintaining a public database on capacity along thousands of pipeline segments.

The capacity release program has one remarkable flaw: Order 636 imposes price caps on resold capacity. The price caps will have the expected consequences. They will produce shortages that allocate space to low-valued users who were there first, wasteful efforts by victims to mitigate the effects of being shut out, and poorer price signals to tell where new capacity should be built. Before Order 636, traders could circumvent similar caps with ``buy-sell" transactions, in which a final user without transport capacity could buy gas in the field and immediately resell it to someone with capacity. After the gas moved downstream, the final user would repurchase it at a price that included the actual value of the transport service. Order 636 prohibits new buy-sells but grandfathers some existing ones. Traders will surely find ways around the new price caps. As noted below, even state regulators probably do not want the caps.

The Downstream Consequences

In 1988 Martha Hesse, then-chairman of FERC, called gas distributors ``an island protected by monopoly--and they are the only remaining protected island in a sea of competition." Although FERC cannot regulate distributors, it is using what leverage it has to move them toward competition. Competition at the distributor level requires that final users who would otherwise be captives be given more service choices. If the choices are denied, states can continue to impose cross-subsidizing rate structures. In his partial dissent from *Associated Gas Distributors*, Judge Abner Mikva saw the writing on the wall. If a pipeline has an optional expedited certificate, it becomes less likely that a bypassed distributor can successfully petition FERC to deny direct pipeline service to an industrial customer. According to Judge Mikva, the certificate would ``vitiate the ability of state commissions to provide affordable energy for their residents"--that is, to cross subsidize.

FERC has been permissive in allowing industrial users to tap directly into interstate pipelines for delivery of their own purchases. Three appellate circuits are now in agreement that those bypasses are in interstate commerce and thus are subject to FERC jurisdiction. Nonfederal regulation is generally insulated from federal scrutiny (including antitrust) by the so-called state action doctrine, which allows lower levels of government to regulate as long as the regulation has a well-articulated purpose. Those purposes can include a desire to redistribute, to favor local interests, or to suppress competition. Whatever it has done for competition, bypass policy has encouraged candor. FERC recently approved a bypass in which Lawrence Paper Company contracted with Williams Natural Gas, an interstate pipeline, for delivery of Lawrence's own gas purchases. Invoking the state action doctrine, Kansas Public Service, the bypassed distributor, told FERC that the bypass ``thwarts state efforts to subsidize residential consumers with economic rents secured from business." FERC noted that in the summer Williams charged $.119 to transport a thousand cubic feet of gas several hundred miles, while Kansas Public Service charged $1.08 to move it the last 1,600 feet from the pipeline to the plant.

If its bypass policy succeeds in lessening retail cross subsidization, FERC will have done another remarkable thing. It will be encouraging states to deregulate some aspects of distribution, and there are good reasons for distributors not to fight that action. In the new market order distributors can earn neither political nor economic profits by continuing as full-requirements resellers of gas. As bypass expands, their customers will be mostly small users with poor load factors. To meet peaks distributors will have to make expensive gas purchase and transport arrangements, for which they can charge only those customers. Their best bet is to follow the lead of the pipelines and turn themselves into transporters.

A number of states are moving in that direction. The California Public Utilities Commission has required the state's three large distributors to become transporters for ``noncore" end-users who wish to purchase their own gas. The distributors must file cost-based rates for intrastate transport and dedicate parts of their interstate pipeline capacity to such use, to the extent that FERC allows the latter. Their remaining ``core" customers also have increased options. Under a pilot ``core aggregation" program brokers can collect customers too small to qualify for noncore status. A certified customer group can enter the interstate market as a purchaser, with local transport guaranteed. Successful aggregations of schools, hospitals, and small industrials have already been made. Apparently, even low-load-factor customers can do that. Citizens Resources, a nonprofit corporation in Massachusetts, has already taken advantage of its state's transport programs to deliver wellhead purchases to low-income users.

FERC policy is encouraging efficiency in other aspects of state regulation. The California commission recently completed a multiyear study of the long-run marginal costs of serving different types of customers. In December 1992 it announced that future gas ratemakings would be based on those more economically efficient measures of cost causation. The regulatory departure from

traditional arbitrary methods of cost allocation has been impelled by the distributors' need to accurately measure the costs of responding to competition. At least three new or expanded interstate pipelines entering California threaten to take away major parts of the distributors' industrial loads. One, Kern River, devotes most of its capacity to industrial users who are bypassing distributors. State regulators have responded by instituting rules that allow distributors to offer competitive transport rates more expeditiously.

Although it is unclear how, if at all, the capacity release price caps of Order 636 will affect state-level policy, an interesting symmetry might arise. In the past FERC pressured the states to remove regulations that impaired competition in interstate markets. If the caps impair the efficiency of distributors or deny them resale revenues, states may put similar pressure on FERC. Mitchell Wilk, former head of the California commission, recently said that ``FERC is applying a form of rent control to capacity release" and that the best signal for new facilities ``would be to let the price for released capacity go to whatever level the market will bear."

What Happens Next?

Fondness for an imaginary past transcends politics and profession, and the gas industry is no exception. In its cost-benefit analysis of Order 636, FERC's Office of Economic Policy argues that the order will facilitate the formation of long-term contracts for gas, which are vanishing from the market. Adding to the spectrum of feasible contracts is indeed a benefit, but FERC fails to ask who in today's gas market would want such a contract. (Small electricity producers may be an important exception.) It is hard to envision anything closer to the textbook ideal of perfect competition than today's gas market. That market contains many buyers and sellers, a standardized commodity, abundant price information, few glitches in deliverability, and now even futures and options. Long-term supply arrangements are rare in such markets, because price is almost always at a level that ensures that the good will be available on short notice. Those who wish to hedge against price risks (or to gamble on bearing additional risk) can hold inventories, futures positions, or options. If an existing supply package is not exactly what the buyer wants, numerous brokers and marketers can customize it.

The past was indeed an era of long-term contracts, full-requirements pipeline resales, exclusive territories, take-or-pay, and fully bundled distribution service. Those institutions were rational responses to fundamental errors in regulation that are now gone and will probably never return. Even in the shortage era, they did not make the world more predictable. When they became unbearable, as in the take-or-pay and vintage decontrol episodes, FERC and the courts swept them aside. Long-term deals made sense in a world of wellhead price controls where fears of resource exhaustion were pervasive. As economists David Hatcher and Arlon Tussing remarked in a recent report to the National Regulatory Research Institute, ``the gas procurement practices and performance standards that were appropriate prior to the advent of spot markets and open-access transportation are no longer compatible with the preferences of consumers, the commercial realities faced by natural gas producers, or the redefined economic responsibilities of natural gas pipelines and [distributors]." In short, spot gas will dominate the future.

If the future will be spot gas, what will be the future of the pipelines? In September 1992 Commissioner Branko Terzic chaired the first meeting of FERC's task force on pipeline competition. Former FERC chairman Martin Allday called the task force ``the next logical step for the FERC ... in the new age." (Yes, new age!) The task force hopes to determine when competition is strong enough that pipeline services can be sold at market-based--unregulated--rates. The job is hard because structural measures of competition, such as the number of pipelines reaching a city gate, carry little meaning. If end-users have control of their gas purchases and can exchange transportation entitlements, the fact that they all use the same pipeline is immaterial. Because the new age has been around for such a short time, we do not yet know how services compete with one another. For example, to what extent are interruptible transport and purchases of released capacity substitutable?

It is possible that the task force will deal with the price caps on released capacity imposed by Order 636. By turning the pipelines into transporters, FERC articulated a belief that gas users are the best judges of how to arrange their own supplies. If so, it is hard to believe that users are incompetent to buy transportation at market prices. FERC's draft order in a 1992 Colorado Interstate Gas Co. docket indicates some openness to alternatives. Although it rejected the pipeline's rate proposal, FERC said that it would entertain rates that allocated transport by price but left the pipeline recovering no more than its cost of service. FERC failed to note that this outcome would occur in an uncontrolled secondary market for rights to released capacity, as long as the holder of the capacity was responsible for paying the pipeline's regulated rate.

FERC's theoretical argument for price caps is that they prevent the exercise of monopoly power.

FERC has not produced data on monopoly power and has not shown that a resale price cap is an efficient way to regulate such power. The argument for caps is weak everywhere. Even if the sole customer on a pipeline segment, a distributor with transport rights will have difficulty earning monopoly profits from their sale. (The pipeline will continue to receive only its allowable return.) For success, it must reserve capacity that it will never use and then dupe state regulators into believing that its expense was prudent. If it somehow succeeds in reselling the capacity at high prices, state regulators will pass the windfall through to its customers. The resale gives only a one-shot gain, after which purchasers can reallocate the space competitively. Other aspects of regulation render the withholding of capacity self-defeating. Generally, a pipeline must make unused firm capacity available for interruptible service. The more idle capacity a would-be monopolist acquires, the greater the reliability of interruptible service.

Between the 1960s and the 1980s distributors were constrained by state-imposed public utility obligations and buffeted by federal shortage policies beyond their control. With no customers but captives, they gained extensive experience as crisis managers and political actors. The experience left them ill-prepared for today's markets. The distribution plant on which they have a natural monopoly will remain in their hands--and regulated. The gas on which they once had an accidental monopoly will only be theirs to resell if they learn to compete in an increasingly competitive market. In that market they have few natural advantages.

As they did for the interstate pipelines, federal policies and market forces are transforming distributors. Large end-users in states without distributor transport programs will press regulators to institute them, and they now can credibly threaten federally sanctioned bypass. Mirroring events at the federal level, states are fast losing the ability to cross subsidize. Bruce Henning, chief economist for the American Gas Association, asserted: ``It's an increasingly competitive world out there, and rates have to reflect the value of the services being provided. ... [C]ross subsidies are just not sustainable in the long run. People will be looking at what California does in great detail."

It looks as if California is duplicating the federal experience. In December 1992 state regulators approved capacity brokering for customers of distributors. The programs have gone into effect concurrently with capacity release programs on the interstate pipelines that reach the area. Two months later, state regulators facilitated a major geographic widening of competition by issuing an order that allows Southern California Gas Company to market its local storage facilities to users outside California. Non-Californians can inject gas into SoCal's facilities during offpeak periods. In peak periods, they can use SoCal's upstream pipeline capacity to transport their own purchases, while Southern California draws on local storage to meet its needs. A California distributor thus competes with interstate pipelines in the market for storage and hence produces a more efficient year-round utilization of pipelines in the bargain.

The future holds potential problems, but relative to those of 1978, they seem almost trivial. Order 636 contains two major shifts of wealth that Congress might nullify. First, it allows pipelines to roll the transition costs of restructuring into their rates, and some pipelines have put their costs such as reformulating contracts in the hundreds of millions. Second, the move to straight fixed-variable rates will raise the gas bills of many low-load-factor residential customers. Rep. Mike Synar has announced his intention to hold hearings on the impact of Order 636 as soon as he has received a report on it from the General Accounting Office. More ominously, recent resignations at FERC have left President Clinton with four vacancies (of five seats) to fill. The law, however, states that no more than three commissioners can be of the same party.

On the supply side, Texas, Oklahoma, and Louisiana recently instituted prorationing of gas production--for the same mix of conservation and economic reasons that supported oil prorationing for so long. Although ultimately excluded, provisions to prohibit state gas prorationing almost wound up in the 1992 energy bill. In any case, prorationing may have little effect on prices over the long run. The prorationing states account for less gas than before, as production shifts to the Southwest, the Rockies, and Canada. The Clinton energy program favors increased gas use but also proposes broader and more stringent limits on drilling. Offshore wells now produce 25 percent of the nation's gas. If the dilemma is not dealt with, the United States may find itself dependent on imports from Canada.

Where Did We Go Right?

Economists have often noted how difficult it is to regulate only one market in a competitive system. As the shortages spill into related markets, regulation must expand. Gas presents the obverse. If the strain on a single market in a regulated system becomes unbearable, it will be hard to deregulate that market alone. Had we bitten the bullet and kept the wellhead market at shortage prices, the regulation of the 1970s might well still be with us. It could probably have dealt indefinitely with production shortages and curtailments of supply to resale pipelines and distributors.

Instead, the pipelines misread the markets of the late 1970s and early 1980s. Believing that shortages would be perpetual and that they would always be able to pass on their costs, the pipelines signed take-or-pay contracts at outrageous prices. Threatened with insolvency because demand turned out to be elastic, they got regulatory relief in the form of special marketing programs. Even after *Maryland Peoples' Counsel* invalidated the programs, the old regime might have limped along. FERC could have told the pipelines to eat their take-or-pay exposure (which producers had always argued was overstated) and allowed some to go bankrupt or to be acquired. Instead, the commission issued Order 436 and reinvented the industry.

There is little question that pipelines should always have been transporters rather than resellers. A 1935 FTC report on them said so, and as the market grew, the case became stronger. Although the *Associated Gas Distributors* decision discussed the legal issues in detail, the court was clearly concerned with the efficiency of Order 436. Had Judge Mikva rather than Judge Williams been in the majority, he might have invalidated the order because it might redistribute in the wrong direction. Although Orders 436 and 500 abrogated certain contracts, in both cases the courts used efficiency arguments to rationalize their intrusions. Whether regulation actually compelled the parties to write the terms they did, the apparent deference to markets was noteworthy.

Order 451 presents a more problematic overreach. Here, FERC reclassified and deregulated gas that Congress clearly meant to keep regulated. The commission claimed that it was obeying the Natural Gas Act's requirement that it set ``just and reasonable" prices. A different FERC might have found it just and reasonable to lower the price of uncontrolled gas in the interest of justice. When the Supreme Court upheld Order 451, it essentially approved a refusal to regulate. Twenty-five years earlier, the *Phillips* Supreme Court said that the Natural Gas Act compelled the FPC to regulate wellhead prices. The courts that have ruled on distributor bypass have favored FERC, but Judge Mikva might not have, if his dissent in Associated Gas Distributors is relevant. A redistributionist FERC might have issued a very different Order 636--or none at all. The commission could have argued that since pipelines had always been resellers to distributors, their advantages should continue, or that straight fixed-variable rates should not be instituted because they hurt widows and orphans.

In important ways the friends of competition got lucky this time, particularly in the courts. Few proponents of limited government complained about judicial overreach when it favored competition. What happened at FERC is more encouraging. Bipartisan as a matter of law, it issued every important order in this episode unanimously. Individual commissioners sometimes concurred in part or dissented in part, as one might expect, with orders that were 200 pages long. But they all seemed to listen to the economic parables of competition and efficiency, as retold in the strange context of the gas industry. (For those who want to look, FERC staff's study of Order 636 contains ``consumer surplus" diagrams.)

Unlike many other times, economists were taken seriously, in large part because their understanding of the industry and its regulation allowed them to present practical rather than mathematical arguments to the commissioners. Academics have a long history of complaining that the regulators never listened to them and have invented theories of regulation to explain why. The theories were often just ``public interest" theories with the algebraic signs reversed. The regulators had good reason not to listen to us reread our textbooks to them: they had real industries to deal with. Many price theory textbooks use the pipeline as an example of natural monopoly. None ever discusses how space in a pipeline might nevertheless be allocated competitively. The University of Chicago and public choice literatures on regulation are necessary antidotes to fables of an economist-king who can cure ``market failures" by fiat. But the case of natural gas points out something else. At the margin informing real regulators with economic ideas might make a difference.

Selected Readings

Hatcher, D.B. and Tussing, A. ``State Regulatory Challenges for the Natural Gas Industry in the 1990s and Beyond." Occasional Paper No. 15. Columbus: National Regulatory Research Institute, 1992. Pierce, R.J., Jr. ``Reconstituting the Natural Gas Industry from Wellhead to Burnertip." *Energy Law Journal*, Vol. 9 (1988). Smith, R.T., DeVany, A.S., and Michaels, R.J. ``Defining a Right of Access to Interstate Natural Gas Pipelines." *Contemporary Policy Issues*, Vol. 8 (1990). U.S. Federal Energy Regulatory Commission. ``Costs and Benefits of the Final Restructuring Rule." Office of Economic Policy Discussion Paper (Spring 1992).

Rules governing the enforcement of gas pipelines safety in State of Colorado

4 CCR 723-11 REVISED

RULES GOVERNING THE ENFORCEMENT OF GAS PIPELINE SAFETY

formerly Part 190

Authority: 49 CFR 190, § 40-2-115 C.R.S, § 40-2-108 C.R.S., § 40-6-101(1), Article 4 of Title 24, C.R.S.

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RULE 1. STATEMENT OF BASIS AND PURPOSES.

Part 1

RULES GOVERNING THE FILING OF REPORTS RELATING TO GAS PIPELINE SAFETY

Rule 1. Statement of Basis and Purposes.

(a) This part prescribes requirements for the reporting of incidents, safety-conditions, and annual pipeline summary data by operators of gas pipeline systems located in the State of Colorado to the United States Department of Transportation and the Safety and Enforcement Section of the Commission.

(b) This part does not apply to--

(1) Gathering of gas outside of the following areas:

(i) The limits of any incorporated or unincorporated city, town, or village.

(ii) Any designated residential or commercial area such as a subdivision, business or shopping center, or community development.

(c) These rules are adopted by the Commission, acting as agent for the United States Department of Transportation by virtue of the annual submission for certification under Section 5 (a) of the Natural Gas Pipeline Safety Act of 1968, as amended 49 U.S.C. §§ 1671, et seq., ("NGPSA"). Under these rules, the State of Colorado enforces the provisions of the NGPSA with respect to the intrastate pipeline transportation of gas over which it has jurisdiction under state law. The Commission has authority under Section 40-2-115, C.R.S. to enter into cooperative agreements with any agency of the United States and to adopt rules and regulations to administer and enforce the NGPSA. The Commission has authority under Section 40-2-108, C.R.S. to adopt rules and regulations as are necessary for the proper administration and enforcement of Title 40, C.R.S.

Rule 2. Definitions.

As used in these rules and in the RSPA (Research and Special Programs Administration) Forms referenced in these rules--

(a) **"Gas"** means natural gas, flammable gas, gas which is toxic or corrosive, and petroleum gas as defined in 49 C.F.R. § 192.11(c).

(b) **"Transportation of gas"** means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas in or affecting intrastate commerce.

(c) **"Pipeline"** or **"Pipeline System"** means all parts of those physical facilities through which gas moves in transportation, including, but not limited to, pipes, valves, and other appurtenances attached to pipes, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies.

(d) **"Direct Sales Pipeline"** means a pipeline from an interstate or intrastate gas pipeline to a direct

sales meter or to the connection with a direct sales customer's piping, whichever is farther downstream. A direct sales meter in the meter that measures the transfer of gas to a direct sales consumer purchasing gas for its consumption, and does not include small-volume users, such as farm taps.

(e) **"Master Meter System"** means a pipeline system for distributing gas within, but not limited to, a definable area, such as a mobile home park, housing project, or apartment complex, where the operator of the mobile home park, housing project or apartment complex purchases metered gas from an outside source for resale thorough a gas distribution pipeline system. The gas distribution pipeline system supplies the ultimate consumer who either purchases the gas directly through a meter or by other means, such as by rents.

(f) **"Municipality"** means a city, county or any other political subdivision of the State of Colorado.

(g) **"Operator"** means a person who engages in the transportation of gas.

(h) **"Person"** means any individual, firm, joint venture, partnership, corporation, association, state, municipality, cooperative association, or joint stock association, and includes any trustee, receiver, assignee, or personal representative thereof.

(i) **"State"** means the State of Colorado.

(j) **"Commission"** means the Public Utilities Commission of the State of Colorado.

(k) **"Incident/Accident"** means any of the following:

(1) An event that involves a release of gas from a jurisdictional pipeline which results in-

(i) Death, or personal injury necessitating inpatient hospitalization; or

(ii) Estimated property damage, including the cost of gas lost to the operator or others, or both, of $50,000 or more.

(2) An event that is significant, in the judgment of the operator, even though it did not meet the criteria of paragraph (1).

(l) **"Major construction"** means the construction of any new pipeline which is originally estimated to cost $100,000 or more. Cost includes only the direct costs associated with the construction.

(m) **"Major repair"** means any repair, replacement, renewal or upgrade to a pipeline which is originally estimated to cost $50,000 or more. Cost includes only the direct costs associated with the repair.

(n) **"Gathering pipeline"** means a pipeline that transports gas from a current production facility to a transmission pipeline or main.

(o) **"Transmission pipeline"** means a pipeline other than a gathering pipeline, that:

(1) Transports gas from a gathering pipeline or storage facility to a distribution center or storage facility;

(2) Operates at a hoop stress of 20 percent or more of SMYS; or

(3) Transports gas within a storage field.

(p) **"SMYS"** means specified minimum yield strength.

(1) For steel pipe manufactured in accordance with a listed specification, SMYS is the yield strength specified as a minimum in that specification; or

(2) For steel pipe manufactured in accordance with an unknown or unlisted specification, SMYS is the yield strength in accordance with 49 C.F.R. § 192.107(b).

Rule 3. Telephonic notice of certain incidents/accidents.

(a) At the earliest practicable moment following discovery, but generally not to exceed two hours after discovery, an operator shall give telephonic notice in accordance with paragraph (b) of this rule

of each incident/accident as defined in Rule 2(k) of these rules. In addition, telephonic notice must be made to the Safety and Enforcement Section of the Commission at 800-888-0170 ext. 349 (in Denver 894-2000 ext. 349) if an incident/accident resulted in the evaluation of approximately 50 or more people from a normally occupied public building, or resulted in the closure of a public street or highway.

(b) Each notice required by paragraph (a) of this rule shall be made by telephone to the United States Department of Transportation, National Response Center (NRC) 800-424-8802 (in Washington, D.C. 267-2675) and to the Safety and Enforcement Section of the Commission, 800-888-0170 ext. 349 (in Denver, CO 894-2000 ext. 349), and shall include the following information:

(1) The names of operator and person making the report and their telephone numbers;

(2) The location of the incident/accident;

(3) The time of the incident/accident;

(4) The number of fatalities and personal injuries, if any;

(5) All other significant facts that are known by the operator which may be relevant to the cause of the incident/accident or extent of the damages; and

(6) The National Response Center control number.

Rule 4. Addressees for written reports.

(a) Each written report required by these rules, except for Notices of Major Construction or Major Repair, shall be made to the Information Resources Manager, Office of Pipeline Safety, Research and Special Programs Administration, U.S. Department of Transportation, Room 8417, 400 Seventh Street SW, Washington, D.C. 20590.

(b) A copy of each written report required by paragraph (a) of this rule mailed to the Information Resources Manager shall be filed with the Safety and Enforcement Section, Public Utilities Commission of the State of Colorado, 1580 Logan Street, OL-2, Denver, CO 80203.

Rule 5. Distribution system: Incident/accident report.

(a) Except as provided in paragraph (c) of this rule, each operator of a distribution pipeline system shall file Department of Transportation Form RSPA F 7100.1 with the agencies as set forth in Rule 4 of these rules as soon as practicable, but not more than 30 days, after discovery of an incident/accident required to be reported under Rule 3 of these rules.

(b) When additional relevant information is obtained after the report is filed under paragraph (a) of this rule, the operator shall file a supplementary report as soon as practicable as deemed necessary by the operator with a clear reference by date and subject to the original report.

(c) The incident/accident report required by this rule need not be submitted with respect to master meter systems or liquefied natural gas facilities.

Rule 6. Distribution system: Annual report.

(a) Except as provided in paragraph (b) of this rule, each operator of a distribution pipeline system shall file an annual report for that system on Department of Transportation Form RSPA F 7100.1-1 with the agencies as set forth in Rule 4 of these rules. This report must be filed each year, not later than March 15, for the preceding calendar year.

(b) The annual report required by this rule need not be submitted with respect to petroleum gas systems which serve fewer than 100 customers from a single source.

Rule 7. Distribution systems reporting transmission pipelines; transmission or gathering systems reporting distribution pipelines.

Each operator, primarily engaged in gas distribution, who also operates gas transmission or gathering pipelines shall file separate reports for these pipelines as required by Rules 8 and 9 of these rules. Each operator, primarily engaged in gas transmission or gathering, who also operates gas distribution pipelines shall file separate reports for these pipelines as required by Rules 5 and 6

of these rules.

Rule 8. Transmission and gathering systems: Incident/accident report.

(a) Each operator of a transmission or a gathering pipeline system shall file Department of Transportation Form RSPA F 7100.2 with the agencies as set forth in Rule 4 of these rules as soon as practicable, but not more than 30 days, after discovery of an incident/accident required to be reported under Rule 3 of these rules.

(b) When additional relevant information is obtained after the report is filed under paragraph (a) of this rule, the operator shall file a supplemental report as soon as practicable with a clear reference by date and subject to the original report.

Rule 9. Transmission and gathering systems: Annual report.

Each operator of a transmission or a gathering pipeline system shall file an annual report for that system on Department of Transportation Form RSPA 7100.2-1 with the agencies as set forth in Rule 4 of these rules. This report shall be filed each year, not later than March 15, for the preceding calendar year.

Rule 10. Report forms.

Copies of the prescribed report forms are available without charge upon request from the agencies as set forth in Rule 4 of these rules. Additional copies in this prescribed format may be reproduced and used if on the same size and kind of paper.

Rule 11. Reporting safety-related conditions.

(a) Except as provided in paragraph (b) of this rule, each operator shall report in accordance with Rule 12 of these rules and to the extent known the existence of any of the following safety-related conditions involving facilities in service:

(1) In the case of a pipeline that operates at a hoop stress of 20 percent or more of its specified minimum yield strength, general corrosion that has reduced the wall thickness to less than that required for the maximum allowable operating pressure, and localized corrosion pitting to a degree where leakage might result.

(2) Unintended movement or abnormal loading by environmental causes, such as an earthquake, landslide, or flood, that impairs the serviceability of a pipeline.

(3) Any material defect or physical damage that impairs the serviceability of a pipeline that operates at a hoop stress of 20 percent or more of its specified minimum yield strength.

(4) Any malfunction or operating error that causes the pressure of a pipeline that contains or processes gas to rise above its maximum allowable operating pressure, plus the build-up allowed for operation of pressure limiting or control devices.

(5) A leak in a pipeline that contains or processes gas that constitutes an emergency.

(6) Any safety-related condition that could lead to an imminent hazard and cause (either directly or indirectly by remedial action of the operator), for purposes other than abandonment, a 20 percent or more reduction in operating pressure or shutdown of operation of a pipeline.

(b) A report is not required for any safety-related condition that--

(1) Exists on a master meter system or a customer-owned service line;

(2) Is an incident/accident or results in an incident/accident before the deadline for filing a safety-related condition report;

(3) Exists on a pipeline (other than a liquefied natural gas facility) that is more than 220 yards form any building intended for human occupancy or outdoor place of assembly, except that reports are required for conditions within the right-of-way of an active railroad, paved road, street, or highway; or

(4) Is corrected by repair or replacement in accordance with applicable safety standards before the deadline as set forth in Rule 12 for filing the safety-related condition report, except that reports are

required for conditions under paragraph (a)(1) of this rule other than localized corrosion pitting on an effectively coated and cathodically protected pipeline.

Rule 12. Filing safety-related condition reports.

(a) Each report of a safety-related condition under Rule 11(a) of these rules shall be filed with the agencies as set forth in Rule 4 of these rules in writing within 5 working days (not including Saturday, Sunday, or federal or state holidays) after the day a representative of the operator first determines that the condition exists, but not later than 10 working days after the day a representative of the operator discovers the condition. Separate conditions may be described in a single report if they are closely related. To file a report with the United States Department of Transportation by telefacsimile (FAX), dial (202) 366-7128. To file a report with the Safety and Enforcement Section of the Commission by telefacsimile (FAX), dial (303) 894-2065.

(b) The report shall be headed "Safety-Related Condition Report" and provide the following information:

(1) Name and principal address of operator;

(2) Date of report;

(3) Name, job title, and business telephone number of person submitting the report;

(4) Name, job title, and business telephone number of person who determined that the condition exists;

(5) Date condition was discovered and date condition was first determined to exist;

(6) Location of condition, with reference to the town, city, or county; and as appropriate, nearest street address, survey station number, milepost, landmark, or name of pipeline;

(7) Description of the condition, including circumstances leading to its discovery, any significant effects of the condition on safety, and the type of gas transported or stored; and

(8) The corrective action taken (including reduction of pressure or shutdown) before the report is submitted and the planned follow-up future corrective action, including the anticipated schedule for starting and concluding such action.

Rule 13. Filing notices of major construction or major repair.

(a) Each notice of major construction or major repair shall be filed with the Safety and Enforcement Section of the Commission in writing not later than 20 working days before the scheduled or anticipated date of commencement of construction, if practicable. The notice shall contain a description of the anticipated type and location of construction, the estimated cost and date of commencement, and the estimated construction or repair period.

Rule 14. Rule 7 of the Gas Utilities Rules.

(a) Accidents within the meaning of Rule 7 of the Gas Utilities Rules, 4 CCR 723-4, are included within incidents/accidents as defined in Rule 2(k) of these rules.

(b) The reports required to be filed by Rules 5 and 8 of these rules fulfill the reporting requirements of Rule 7 of the Gas Utilities Rules, 4 CCR 723-4.

Part II, Rule 1

PART II. RULES GOVERNING THE ENFORCEMENT OF GAS PIPELINE SAFETY

Rule 1. Statement of Basis and Purposes. These rules prescribe enforcement procedures utilized by the Pipeline Safety Group, Safety and Enforcement Section of the Colorado Public Utilities Commission ("Commission"), acting as agent for the United States Department of Transportation by virtue of the annual submission for certification under Section 5(a) of the Natural Gas Pipeline Safety Act of 1968, as amended, 49 U.S.C. §§ 1671, et seq., ("NGPSA"). Under this agreement, the State of Colorado enforces the provisions of the NGPSA with respect to the intrastate pipeline transportation of gas over which it has jurisdiction under state law. Gas facilities include gas gathering, distribution, transmission, master meter and direct sales systems. The Commission has authority under Section 402115, C.R.S. to enter into cooperative agreements with any agency of the

United States government and to adopt rules and regulations to administer and enforce the safety laws and regulations of the United States under the NGPSA. The Commission has authority under Section 402108, C.R.S. to adopt rules and regulations as are necessary for the proper administration and enforcement of Title 40 of the Colorado Revised Statutes.

4 CCR 72311 Effective July 30, 1994

Rule 2(a)(g)

Rule 2. Definitions. As used in this part:

(a) **"The NGPSA"** means the Natural Gas Pipeline Safety Act of 1968, as amended, 49 U.S.C. §1671 et. seq., as it existed on the date these rules became effective.

(b) **"OPS"** means the Office of Pipeline Safety, which is part of the Research and Special Programs Administration, U.S. Department of Transportation.

(c) **"Presiding Officer"** means the chairman or senior commissioner in a hearing conducted before the Commission en banc, or individual commissioner or administrative law judge in a hearing conducted by a single commissioner or administrative law judge.

(d) **"Person"** means any individual, firm, joint venture, partnership, corporation, association, municipality, cooperative association, or joint stock association, and includes any trustee, receiver, assignee, or personal representative thereof.

(e) **"Respondent"** means a person upon whom a compliance directive, notice of probable violation, consent stipulation, or order to show cause has been served.

(f) **"State"** means the State of Colorado.

(g) **"Hearing"** means any hearing provided in Rule 9 of these rules.

4 CCR 72311 Effective July 30, 1994

Rule 2(h)3(a)

(h) **"Direct Sales Pipeline"** means a pipeline from an interstate or intrastate gas pipeline to a direct sales meter or the connection to a direct sales customer's piping, whichever is farther downstream. A direct sales meter is the meter that measures the transfer of gas to a direct sales consumer purchasing gas for its own consumption, and does not include smallvolume users, such as farm taps.

(i) **"Chief"** means the head of the Safety and Enforcement Section of the Public Utilities Commission of the State of Colorado.

(j) **"Staff"** means the staff of the Gas Pipeline Safety Group, a unit of the Safety and Enforcement Section of the Public Utilities Commission of the State of Colorado.

(k) **"Commission"** means the Public Utilities Commission of the State of Colorado.

(l) **"Director"** means the Director of the Commission.

(m) **"Intrastate pipeline transportation"** means pipeline facilities and transportation of gas within the State of Colorado which are not subject to the jurisdiction of the Federal Energy Regulatory Commission under the Natural Gas Act.

Effective July 30, 1994

Rule 3. Service.

(a) Each order, notice, or other document required to be served under these rules shall be served personally or by registered or certified mail.

4 CCR 72311 Effective July 30, 1994

Rule 3(b)4(c)

(b) Service upon a person's duly authorized representative or agent constitutes service upon that person.

(c) Service by registered or certified mail is complete upon mailing. An official U.S. Postal Service receipt evidencing a registered or certified mailing constitutes prima facie evidence of service.

Effective July 30, 1994

Rule 4. Subpoenas.

(a) The Commission, any commissioner, any administrative law judge, or the Director of the Commission, may issue a subpoena in accordance with the provisions of § 406103(1), C.R.S.

(b) Subpoena practice before the Commission shall be governed by Rule 45 of the Colorado Rules of Civil Procedure, except as provided in this rule and §§ 406102 and 103, C.R.S. When Rule 45 is applied to Commission subpoena practice, the word "court" in Rule 45 means the Commission, a hearings commissioner, an administrative law judge, or the Director of the Commission.

(c) Enforcement of any subpoena issued under this rule shall be in the district court, as provided in § 406103(2), C.R.S.

4 CCR 72311 Effective July 30, 1994

Rule 5(a)(c)

Rule 5. Inspections.

(a) Staff employees authorized by the Chief, upon presenting appropriate credentials are authorized to enter upon, inspect, and examine, at reasonable times and in a reasonable manner, the records and properties of persons subject to the NGPSA and these rules to the extent such records and properties are relevant to determining the compliance of such persons with the NGPSA, or state law, rules, regulations, or orders issued thereunder.

(b) Inspections are ordinarily conducted pursuant to one of the following:

(1) Routine scheduling by the Chief;

(2) A complaint received from a member of the public;

(3) Information obtained from a previous inspection;

(4) Pipeline accident or incident;

(5) Whenever deemed appropriate by the Chief; or

(6) At the request of the Western Region Director, OPS, United States Department of Transportation.

(c) If, after an inspection, the Staff believes that further information is needed to determine appropriate action, the Staff may send the owner or operator a "Request for Specific Information" to be answered within 30 days after receipt of the letter.

4 CCR 72311 Effective July 30, 1994

Rule 5(d)6

(d) To the extent necessary to carry out the responsibilities of the Commission under the NGPSA, and/or state rules and regulations, the Staff may require testing of portions of pipeline facilities subject to the NGSPA or state regulations which have been involved in or affected by an accident. However, before exercising such authority, the Staff shall make every effort to negotiate a mutually acceptable plan with the owner of such facilities for performing such testing.

(e) When the information obtained from an inspection or from other appropriate sources indicates that further action is warranted, the Chief may issue a warning letter under Rule 6 of these rules, or may initiate one or more enforcement proceedings prescribed in these rules.

Effective July 30, 1994

Rule 6. Warning lettersWarning letters.

Upon determining that a probable violation of the NGPSA, or any State rule, regulation or order issued thereunder has occurred, the Chief may issue a Warning Letter notifying the owner or operator of the probable violation and advising him to correct it or be subject to enforcement action under these rules.

4 CCR 72311 Effective July 30, 1994

Rule 7(a)(c)

Rule 7. Notice of probable violationNotice of probable violation.

(a) Except as otherwise provided by these rules, the Chief may commence an enforcement proceeding by serving a notice of probable violation on a person subject to the NGPSA or State rules and regulations adopted by the Commission under the NGPSA charging him with a probable violation of the NGPSA, or any State rule and regulation, or order issued thereunder.

(b) A notice of probable violation issued under this rule shall include:

(1) A statement of the provisions of the law, rules, regulations or orders which the respondent is alleged to have violated and a statement of the facts upon which the allegations are based;

(2) A notice of response options available to the respondent under Rule 8;

(3) If a civil penalty is proposed under Rule 12, the amount of the proposed civil penalty and the maximum civil penalty for which respondent may be liable under law; and

(4) If a compliance directive is proposed under Rule 10, a statement of the remedial action being sought in the form of a proposed compliance directive.

(c) The Chief may amend a notice of probable violation not later than thirty (30) days prior to the commencement of a hearing under Rule 9. After this the Chief may amend such notice only with leave of the Presiding Officer.

4 CCR 72311 Effective July 30, 1994

Rule 8(a)(b)(3)

Rule 8. Response options. Within 30 days after his receipt of a notice of probable violation the respondent shall respond to the Chief in any of the following ways:

(a) When the notice of probable violation contains a proposed civil penalty,

(1) the respondent may pay the proposed civil penalty as provided in Rule 14 and the Staff will close the case with prejudice;

(2) the respondent may submit an offer in compromise of the proposed civil penalty under paragraph (c) of this rule and paragraph (a) of Rule 14;

(3) the respondent may submit written explanations, information or other materials in answer to the allegations or in mitigation of the proposed civil penalty; or

(4) the respondent may request a hearing under Rule 9.

(b) When the notice of probable violation contains a proposed compliance directive,

(1) the respondent may agree to the proposed compliance directive;

(2) the respondent may request the execution of a consent stipulation under Rule 11;

(3) the respondent may object to the proposed compliance directive and submit written explanations, information or other materials in answer to the allegations in the notice of probable violation; or

4 CCR 72311 Effective July 30, 1994

Rule 8(b)(4)9(a)

(4) the respondent may request a hearing under Rule 9.

(c) An offer in compromise under paragraph (a)(2) of this rule shall be made by the respondent submitting a check or money order for the amount offered. If the offer in compromise is accepted by the Chief, the respondent will be notified in writing that the acceptance is in full settlement of the proposed civil penalty . If an offer in compromise submitted under paragraph (a)(2) of this rule is rejected by the Chief, it shall be returned to the respondent with written notification. Within 10 days of his receipt of such notification, the respondent shall again respond to the Chief in one or more of the ways provided in paragraph (a) of this rule.

(d) If the respondent fails to respond in accordance with this rule, the Notice of Probable Violation shall be set for hearing at a time and place convenient to the Commission.

Effective July 30, 1994

Rule 9. Hearing.

(a) A request for a hearing in response to a notice of probable violation issued under Rule 7 shall be accompanied by a statement of the issues which the respondent intends to raise at the hearing. The issues may relate to the alleged violations, new information or to the proposed compliance directive or proposed civil penalty amount. A respondent's failure to specify an issue may result in waiver of his right to raise that issue at the hearing.

4 CCR 72311 Effective July 30, 1994

Rule 9(b)10(b)(4)

(b) The hearing shall be held in accordance with the Rules of Practice and Procedure of the Commission, 4 CCR 7231 and article 6 of Title 40, Colorado Revised Statutes.

Effective July 30, 1994

Rule 10. Consent stipulationsConsent stipulations.

(a) At any time before the issuance of a compliance directive under Rule 10, the Chief and the respondent may agree to dispose of the case by joint execution of a consent stipulation.

(b) A consent stipulation executed under paragraph (a) of this rule shall include:

(1) An admission by the respondent of all jurisdictional facts;

(2) An express waiver by the respondent of further procedural steps, including his right to a hearing under Rule 9, his right to seek judicial review or otherwise challenge or contest the validity of the stipulation;

(3) An acknowledgement by the respondent that the notice of probable violation may be used to construe the terms of the consent stipulation; and

(4) A statement of the actions required of the respondent and the time by which such actions shall be accomplished.

4 CCR 72311 Effective July 30, 1994

Rule 11(a)12(e)

Rule 11. Civil penalties.

(a) As provided in Section 407117, C.R.S., any person who is determined to have violated a provision of the NGPSA or any state rule, regulation or order issued thereunder, shall be subject to a civil penalty not to exceed $10,000 per violation; except that, in the case of a group or series of related violations, the aggregate amount of such penalties shall not exceed $500,000. Each day of a continuing violation shall constitute a separate violation.

(b) No person shall be subject to a second civil penalty for the violation of any provision of the

NGPSA, or any State rule or regulation adopted thereunder, or any order issued pursuant to Rules 10, 11, or 15, if both violations are based on the same act.

Effective July 30, 1994

Rule 12. Civil penalty considerations.Civil penalty considerations The presiding official may impose a civil penalty under these rules only after considering:

(a) The nature, circumstances and gravity of the violation;

(e) Any good faith efforts by the respondent in attempting to achieve compliance and to prevent future similar violations;

4 CCR 72311 Effective May 15, 1995

Rule 12(g)13(c)

(g) The size of the business of the violator.

Effective May 15, 1995

Rule 13. Payment of penaltyPayment of penalty.

(a) Payment of a civil penalty under these rules shall be by check or money order payable to the "Public Utilities Commission of the State of Colorado".

(b) If a respondent fails to pay the full amount of a civil penalty assessed under these rules within 45 days after service of an administratively final decision, the Commission may refer the case to the Attorney General's Office with a request that an action be commenced in court to collect the civil penalty.

(c) If a respondent elects to make an offer in compromise of a civil penalty proposed in a notice of probable violation issued under Rule 7, he shall do so in accordance with the procedures set forth in Rule 8.

4 CCR 72311 Effective July 30, 1994

Rule 14(a)(b)

Rule 14. Hazardous facility ordersHazardous facility orders.

(a) Except as provided in paragraph (b) of this rule, if the Commission finds, after reasonable notice and opportunity for hearing in accordance with paragraph (c) of this rule, a particular pipeline facility to be hazardous to life or property, it shall issue an order pursuant to this rule requiring the owner or operator of the facility to take corrective action. Corrective action may include suspending or restricting the use of the facility, physical inspection, testing, repair, replacement, or other action, as appropriate.

(b) The Commission may waive the requirement for notice and hearing under paragraph (a) of this rule before issuing an order pursuant to this rule when it determines that notice and hearing may result in the likelihood of serious harm to life or property. However, the Commission shall include with the order a notice informing the owner or operator of his right to a hearing upon request as soon as practicable after issuance of the order. The provisions of paragraph (c)(2) of this rule apply to an owner or operator's decision to exercise his right to a hearing. The purpose of such a postorder hearing is for the Commission to determine whether the order should remain in effect or be amended, rescinded or suspended in accord with paragraph (g) of this rule.

Effective July 30, 1994

Rule 14(c)(d)(1)

(c) Notice and hearing:

(1) An order to show cause and notice of hearing under this rule shall be served in accordance with Rule 3, upon the owner or operator of an alleged hazardous facility. The order to show cause shall allege the existence of a hazardous facility, stating the facts and circumstances supporting the ssuance of a "hazardous facility order", and providing the owner or operator an opportunity for a

hearing, identifying the date, time and location of the hearing.

(2) A hearing under this rule shall be presided over by a presiding officer from the Commission. The hearing shall be conducted in accordance with the Rules of Practice and Procedure of the Commission and article 6 of Title 40, C.R.S.

(3) Within 48 hours after conclusion of a hearing under this rule, the presiding officer shall issue a recommended decision to the Commission. If the presiding officer finds the facility to be hazardous to life or property he shall issue an order in accordance with this rule. If he does not find the facility to be hazardous to life or property, he shall discharge the order to show cause.

(d) The presiding officer may find a pipeline facility to be hazardous to life or property under paragraph (a) of this rule:

(1) If under the facts and circumstances he determines the particular facility is hazardous to life or property; or

4 CCR 72311 Effective July 30, 1994

Rule 14(d)(2)(e)(5)

(2) If the pipeline facility or a component thereof has been constructed or operated with any equipment, material, or technique which he determines is hazardous to life or property.

(e) In making a determination under paragraph (d) of this rule, the presiding officer shall consider, if relevant:

(1) The characteristics of the pipe and other equipment used in the pipeline facility involved, including its age, manufacturer, physical properties including its age, manufacturer, physical properties (including its resistance to corrosion and deterioration), and the method of its manufacture, construction or assembly;

(2) The nature of the materials transported by such facility (including their corrosive and deteriorative qualities), the sequence in which such materials are transported, and the pressure required for such transportation; (3) The aspects of the areas in which the pipeline facility is located, in particular the climatic and geologic conditions (including soil characteristics) associated with such areas, and the population density and population and growth patterns of such areas;

(4) Any recommendation of the National Transportation Safety Board issued in connection with any investigation conducted by the Board; and

(5) Such other factors as the presiding officer may consider appropriate.

4 CCR 72311 Effective July 30, 1994

Rule 14(f)(h)

(f) A recommended decision finding a facility to be hazardous shall contain the following :

(1) A finding that the pipeline facility is hazardous to life or property.

(2) The relevant facts which form the basis for that finding.

(3) The legal basis for the recommended decision and order.

(4) The nature and description of particular corrective action required of the respondent.

(5) The date by which the required action must be taken, or completed and, where appropriate, the duration of the order.

(g) The Commission shall rescind or suspend a "hazardous facility order" whenever it is shown to the Commission's satisfaction that the facility is no longer hazardous to life or property. When appropriate, however, such a recision or suspension may be accompanied by a notice of probable violation issued under Rule 7 of these rules.

(h) At any time after a hazardous facility order issued under this rule has become effective, the Commission may request the Attorney General to bring an action in court to enforce the order as

provided in article 7 of Title 40, C.R.S.

4 CCR 72311 Effective July 30, 1994

Rule 15

Rule 15. Injunctive action. Whenever it appears to the Commission that a person has engaged, is engaging in, or is about to engage in any act or practice constituting a violation of any provision of the NGPSA, or State rules, regulations or orders issued under the NGPSA, the Commission may request the Attorney General to bring an action in the appropriate district court for such relief as is necessary or appropriate, including mandatory or prohibitive injunctive relief, interim equitable relief, and monetary penalties as provided in article 7 of Title 40 of the C.R.S.

4 CCR 72311 Effective July 30, 1994

PART III, Rule 1(a)(b)

PART III. RULES GOVERNING SAFETY STANDARDS FOR LIQUEFIED NATURAL GAS FACILITIES

RULE 1. STATEMENT OF BASIS AND PURPOSES.STATEMENT OF BASIS AND PURPOSES

(a) These rules prescribe safety standards for liquefied natural gas (LNG) facilities utilized by the Pipeline Safety Group, Safety and Enforcement Section of the Colorado Public Utilities Commission ("Commission"). The gas facilities are used in the transportation of gas by pipeline that is subject to the Natural Gas Pipeline Safety Act of 1968, as amended, 49 U.S.C. §§ 1671, *et seq.*, ("NGPSA") and 49 CFR 192--Transportation of Natural and other Gas by Pipeline: Minimum Federal Safety Standards (liquefied natural gas facilities). The Commission has authority under § 402115, C.R.S., to enter into cooperative agreements with any agency of the United States government and to adopt rules and regulations to administer and enforce the safety laws and regulations of the United States under the NGPSA. The Commission has authority under § 402108, C.R.S., to adopt rules and regulations as are necessary for the proper administration and enforcement of Title 40 of the Colorado Revised Statutes.

(b) The Commission adopts herein the federal safety standards for liquefied natural gas facilities used in the transportation of gas by pipeline, that are subject to the Natural Gas Pipeline Safety Act of 1968, which standards are adopted in the Code of Federal Regulations, Title 49, Part 193, revised as of October 1, 1993. This subsection 92 does not include later amendments to, or editions of, Title 49, Part 193, Code of Federal Regulations. The title, address, and telephone

PART III, Rule 1(b)(d)

number of the person employed by the Colorado Public Utilities Commission from whom information regarding how the incorporated material may be obtained or examined is:

Chief of Safety and Enforcement Section

Colorado Public Utilities Commission

1580 Logan Street, OL3

Denver, CO 80203

(303) 8942000, extension 351.

The incorporated material may be examined at the offices of the Commission, 1580 Logan Street, OL3, Denver, Colorado 80203 between the hours of 8:00 a.m. and 5:00 p.m., Mondays through Fridays, except when such days are State holidays. The incorporated material also may be examined at any state publications library.

(c) In the event of a conflict between the provisions of 49 CFR 193 and 4 CCR 72311 regarding the administrative, enforcement, and reporting requirements, the latter shall apply.

(d) Waivers of these rules may be granted by the commission in accordance with the provisions in NGPSA.

Vancouver Island Natural Gas Pipeline Act

VANCOUVER ISLAND NATURAL GAS PIPELINE ACT [RSBC 1996] CHAPTER 474

Contents

Section

Definitions

1 In this Act:

"local distribution utility" means a public utility, as defined by section 1 of the *Utilities Commission Act*, that operates a system, connected directly to the pipeline, for the transmission, sale or delivery of natural gas;

"natural gas" means all fluid hydrocarbons, both before and after processing, which are not defined as

petroleum, and includes hydrogen sulphide contained in them;

"petroleum" means crude petroleum and all other hydrocarbons, regardless of gravity, that are or can be recovered in liquid form from underground through a well by ordinary production methods;

"pipeline" means the Vancouver Island Natural Gas Pipeline as defined by section 2;

"proponent" means the Pacific Coast Energy Corporation.

Pipeline

2 The natural gas pipeline facilities on the mainland of British Columbia, in the Strait of Georgia and on Vancouver Island, including connected works and undertakings owned by the proponent, all as described in the proponent's application for an energy project certificate under the *Utilities Commission Act*, are to be known as the Vancouver Island Natural Gas Pipeline.

Agreements with Canada, etc.

3 Subject to the approval of the Lieutenant Governor in Council, the minister may enter into one or more agreements with

(a) Canada,

(b) the proponent,

(c) one or more local distribution utilities,

(d) Westcoast Energy Inc., or

(e) Alberta Energy Company Ltd.,

with respect to the funding, construction and operation of the pipeline, the granting of service areas and any other matter relating to this Act.

Provincial financial assistance

4 (1) The minister may, to facilitate construction of the pipeline, make grants or loans to the proponent not exceeding $25 million in the aggregate on terms and conditions that may be specified in an agreement under section 3 (a).

(2) Amounts, not exceeding $25 million in the aggregate, may be paid out of the consolidated revenue fund for the purposes of grants or loans under this section.

Rate stabilization facility

5 (1) The Minister of Finance and Corporate Relations, on the advice of the minister, may make payments out of the consolidated revenue fund to a party to an agreement under section 3, on terms and conditions that may be specified in the agreement, respecting the stabilization of the price at which consumers purchase natural gas transmitted through the pipeline.

(2) Subsection (1) does not apply after December 31, 2011

Conversions assistance program

6 (1) Subject to the regulations, the minister must establish a program to grant financial assistance to persons to assist in the conversion of oil, propane or other fuel fired appliances to the use of natural gas as a fuel.

(2) A cumulative total, not exceeding $55 million, may be paid out of the consolidated revenue fund for the purposes of the program established under this section.

Application of utility statutes

7 (1) The *Utilities Commission Act* and the *Gas Utility Act* apply to the proponent and a local distribution utility except to the extent otherwise provided in this section or in a regulation under this section.

(2) The Lieutenant Governor in Council may make regulations as follows:

(a) ordering that prescribed provisions of the *Utilities Commission Act* or of the *Gas Utility Act* do not apply in respect of

(i) the proponent,

(ii) the local distribution utilities, or

(iii) a particular local distribution utility;

(b) prescribing limitations and conditions for the purposes of a regulation under paragraph (a).

(3) Despite Parts 3 and 6 of the *Utilities Commission Act*, the Lieutenant Governor in Council may issue directions to the British Columbia Utilities Commission, specifying one or more of the following:

(a) the factors, criteria and guidelines that the commission must or must not use in regulating and fixing rates for the proponent or a local distribution utility;

(b) classes of customers of the proponent or of a local distribution utility, according to volume of natural gas taken, location, date of application for natural gas service, type of premises or on any other basis the Lieutenant Governor in Council considers appropriate;

(c) the rates that may be permitted to be charged under the *Utilities Commission Act* by the proponent to its customers or by a local distribution utility to its customers, and, in specifying rates under this paragraph, the Lieutenant Governor in Council may differentiate among the classes of customers specified under paragraph (b);

(d) limitations or principles that must be applied by the commission in fixing or varying the rates charged by the proponent to its customers or by a local distribution utility to its customers, and, for any specification of limitations or principles under this paragraph, differentiating, or requiring or empowering the commission to differentiate, among the classes of customers specified under paragraph (b);

(e) for all or part of any year since the commencement of operation of the pipeline, one or more of the following:

(i) the cost of service of the proponent or a local distribution utility;

(ii) the manner of determining the proponent's or a local distribution utility's cost of service;

(iii) the components, factors and considerations that must or must not be taken into account in making a determination under subparagraph (ii);

(f) an order that has been made by the British Columbia Utilities Commission and is or may be relevant to the proponent, one or more local distribution utilities, or both, and doing either or both of the following:

(i) requiring the commission to apply or to refrain from applying that order or a specified portion or aspect of that order to the proponent, one or more local distribution utilities, or both;

(ii) directing the commission as to the extent or manner in which it must or must not apply that order or a specified portion or aspect of that order to the proponent, one or more local distribution utilities, or both.

(4) Despite the *Utilities Commission Act* and the *Gas Utility Act*,

(a) the British Columbia Utilities Commission must comply with a direction issued under subsection (3) of this section, and

(b) if a direction issued under subsection (3) of this section is inconsistent or in conflict with the *Utilities Commission Act* or the *Gas Utility Act*, the direction prevails.

(5) Sections 607 to 609 of the *Municipal Act* applies to the proponent and the local distribution utilities but a municipality may not set rates or charge fees by means of a franchise agreement under that Act.

Power to make regulations

8 The Lieutenant Governor in Council may make regulations respecting the implementation of the conversion assistance program under section 6, including regulations respecting eligibility for assistance under that program.

[STATUTES HOME PAGE]

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Gas rate schedule – City of Long Beach

Gas Department
City of Long Beach

Long Beach Gas & Electric Department
2400 East Spring Street
Long Beach, CA 90806
(562) 570-2000
Contact us: lbgas@ci.long-beach.ca.us

Gas Rate Schedule

Long Beach Municipal Code Chapter 15.36

Effective Date: October 1, 1998

Schedule 9 - Transportation or Exchange of Natural Gas

Applicable to natural gas procured by the customers with annual consumption in excess of 250,000 therms based on the customer's prior calendar year consumption, or estimated annual consumption for new customer, transported or exchanged by the City's Gas Department for the customer under Section 15.36.080 of the Municipal Code.

RATES:

Monthly service charge per customer (Based on usage for most recent twelve month period)	
Tier 1: 0 - 1,000,000 therms	$800
Tier 2: 1,000,001 to 2,000,000 therms	$1,200
Tier 3: Over 2,000,000 therms	$1,800
Transmission charge (per therm) (Based on usage for most recent twelve month period)	
Tier 1: 0 - 1,000,000 therms	$0.08178
Tier 2: 1,000,001 to 2,000,000 therms	$0.07647
Tier 3: Over 2,000,000 therms	$0.05136
Commodity charge (per therm) Applicable to all Tiers	Long Beach WACOG plus a surcharge of $0.0500

Upon recommendation by the General Manager of the Gas and Electric Department, the City Manager may adjust the amount of the surcharge in the Commodity charge per therm a maximum of $0.03 above or below the stated surcharge rate to reflect current changes in market conditions. Notice of the upcoming monthly surcharge amount will be posted at the Gas Department at least 15 days before the beginning of each month and will also be available from the Gas and Electric Department by telephone or facsimile upon request. The Long Beach Weighted Average Cost of Gas (WACOG) will be posted at the Gas and Electric Department within 15 days after the end of each month and will also be available from the Gas and Electric Department by telephone or facsimile upon request.

Minimum charge: At no time shall the rate charged for the commodity and/or its transportation to any customer be less than the cost of the commodity and/or service to the City of Long Beach.

USE PRIORITY:

Service under this schedule provides transportation and delivery of customer-procured compatible pipeline quality gas from designated receipt points to customer premises.

Customers receiving service under this schedule shall have priority in the use of gas over customers served under other rate schedules except Schedules 1, 2, 3, 4, and 5, when there is curtailment or insufficient gas to supply the demands of all customers, and such customers shall be subject to discontinuance of service without notice in case of curtailment or threatened or actual shortage of gas in favor of customers under Schedules 1, 2, 3, 4, and 5. The City shall not be liable for damages which may be occasioned by the curtailment, discontinuance or shut off of such gas supply or service.

SPECIAL CONDITIONS:

1. As a condition precedent to service under this schedule, a separate Transportation/Service Agreement must be executed. The Transportation/Service Agreement shall specify the terms and conditions applicable to service under this schedule.

2. Any costs including modifications or new facilities that may be required to provide the transportation service shall be paid in advance by the customer.

3. Gas transported under this schedule shall be used only by the customer and such gas may not be sold, transported, assigned distributed, exchanged, or otherwise transferred to benefit another customer or provide non-municipal natural gas to any natural gas user, transporter or consumer within the City.

4. At all locations where gas is furnished or used under this schedule, the customer must install separate meters to measure gas subject to a different schedule or schedules.

5. These rates do not apply to services provided by the Southern California Gas Company operating under franchise with the City of Long Beach.

6. Any additional transmission costs or surcharges incurred by Long Beach on behalf of these customers will be passed through to the customer at cost.

7. Customer may elect to purchase all of its gas commodity from the Gas and Electric Department if Customer does the following: a) maintains a deposit with the Gas and Electric Department for the remaining term of the Agreement in an amount equal to the average of two months of gas commodity, transportation, and monthly service charges, b) Customer advises the Gas and Electric Department 10 days before the initial month that the customer elects to purchase all of its gas from the Gas and Electric Department for the remaining term of the Agreement, and c) Customer pays as agreed upon receipt of the monthly bill and is not delinquent in any prior month's billing.

8. The Commodity charge will equal the City of Long Beach Gas and Electric Department's Weighted Average Cost of Gas (WACOG) for purchases made during the month of service plus a fee of $0.0500 per therm (subject to limited adjustment by the City Manager).

9. The Long Beach Weighted Average Cost of Gas (WACOG) is defined as an amount equal tothe Gas and Electric Department's cost per therm of out-of-state gas supply delivered into the Southern California Gas Company's intrastate pipeline system including the weighted average cost per therm of any gas storage withdrawals, without consideration of SoCalGas (or any other intrastate pipeline company providing similar services) pipeline transportation and other system costs associated with intrastate delivery to Long Beach. This WACOG shall be subject to adjustment as the result of tariff, pricing changes, or regulatory action that may be imposed by governmental entities having jurisdiction therein.

10. The WACOG will be calculated on a monthly basis and the commodity charge under this Schedule will be adjusted to reflect the WACOG on a monthly basis. There will be no markup to the customer above the City's true cost of gas as defined in this Condition. The monthly commodity rate will be made available to customers by calling the Gas Department at (562) 570-2060 and will also be posted on the City's Internet web-site. The actual commodity rate to be charged to the customer may differ from the posted rate as the customer's billing period may overlap over two months and therefore the billed commodity rate will reflect the weighted average between two months' WACOG's based on the number of days in each month under the customer's billing cycle.

11. In the event of nonpayment or other noncompliance with conditions, Customer shall pay City all costs incurred by City and caused by such nonpayment or noncompliance, including City's attorney fees, whether for consultation, preparation of any notice, letter, claim, pleading or documents whether or not there is a lawsuit, including attorneys' fees for bankruptcy

proceedings, or for institution and prosecution of any action to enforce any payment or other condition, whether or not such action proceeds to judgment, to the extent permitted by applicable law.

If any term, section, provision, rate or portion of the rate is found to be invalid, ineffective, void, or unenforceable for any reason whatsoever by a court or regulatory body having jurisdiction therein, the remaining terms, sections, provisions, and rates, or portions of rates shall remain in full force and effect.

An advertisement for choosing natural gas marketer - Georgia USA

Walton

Walton Electric Membership Corporation
Monroe, Georgia, USA

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AGL Customers: It's Time to Choose!

The time has come for you to choose a natural gas marketer.

PEACHTREE
NATURAL GAS

After August, the Atlanta Gas Light Company will no longer sell natural gas. That's why you'll have to choose another company. Or if you'd rather not, someone else will decide for you. Do you want to trust someone else with this important decision?

Choose the Walton EMC/Peachtree Natural Gas partnership for your gas needs. Walton EMC has been in the energy business for over 60 years, serving ten Northeast Georgia counties. Peachtree Natural Gas is a Georgia-based company, certified by the Public Service Commission for residential gas marketing, whose parent company counts Coca-Cola, the University of Georgia and Lockheed Martin among its customers.

Peachtree's price has consistently been among or the lowest since marketers began selling gas (verified by newspapers and independent sources). They require no contract, so you know they'll work hard to keep your business month after month.

Choosing Peachtree will not interrupt your gas service. No one will dig on your property. There's no deposit required and budget billing and automatic bank draft are available. In a few months, we'll be able to combine your electric and gas service on one bill.

Best of all, Peachtree won't call Walton EMC members at dinner time or any time. We respect the privacy of your home.

Unfortunately, the new law doesn't give those Walton EMC members served by a municipal natural gas supplier the opportunity to choose.

Members can sign up now and begin buying gas from Peachtree Natural Gas. Gas customers who do not choose a supplier will be assigned a company at random after August 11. Call our office at 770/267-2505, 770/972-2917 or 706/769-5622 or e-mail peachgas@waltonemc.com

For more information, visit Peachtree Natural Gas' web s

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